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SESQUICENTENNIAL YEAR

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EDITORIAL

SESQUICENTENNIAL

It is 1957 and the 150th year of the University of Maryland School of Medicine. This, the fifth oldest medical college in North America, has enjoyed a continued existence which augurs well for the quality of the men who founded the school and the philosophy upon which their successors have so effectively continued.

In the past century and a half medical education and medicine itself have changed greatly from the simple didactic and empiric principles known to John Davidge and his associates who, in 1807, in cooperation with the Medical and Chirurgical Faculty founded Maryland's first medical school.

In its past the School of Medicine claimed a number of important firsts in American medicine. It was here that for the first time compulsory human dissection was begun. Here, bedside teaching in medicine was first conceived. The University also was a leader in the development of teaching in the specialties. It was at the University of Maryland in 1853 that the microscope was first used in America for the diagnosis of cancer. Many of her brilliant alumni have been honored for the discovery of new diseases and in the development of therapy. The University was one of the leaders in the foundation of the Association of American Medical Colleges. It figured prominently in two World Wars and the American Civil War. The rich history of tradition, the continuing medical research and educational activity, in the oldest building in America still devoted to medical education, signals the beginning of a new era.

The School of Medicine of the University of Maryland, now a part of the University of Maryland, rests not upon the laurels of its interesting and illustrious past. New revisions in faculty, policy, staffing, curriculum and a sturdy progressive building program give promise of continuing development in the centuries which lie ahead.

With a rich heritage from the past, Alumni and faculty accept the challenge of a future which certainly has a good beginning on a fertile background.

MEPROBAMATE THERAPY FOR CONVULSIVE DISORDERS OF CHILDREN*

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BALTIMORE, MARYLAND

Although the drug management of convulsive disorders has improved considerably in recent years, epileptologists are always interested in new anticonvulsants. Consequently, when the pharmacologic studies of meprobamate (Miltown)* revealed it to be a potent anticonvulsant in animals, a clinical trial of this drug for the management of convulsive disorders of children was undertaken. The results of this investigation, which was conducted for one year, are disclosed in this report.

CLINICAL MATERIAL

Twenty-five children between the ages of 6 and 15 were selected for this project. These patients were known epileptics whose seizures had been refractory to prolonged treatment with other antiepileptic compounds. The frequency of their seizures had been recorded from a minimum of six months to a maximum of three years prior to this investigation. A similar record was kept during the time of meprobamate therapy.

This group was composed of ten children with organic brain disease subject to grand mal seizures, ten children with petit mal epilepsy and five children with myoclonic seizures. All of these children were treated on an ambulatory basis and, with the exception of two, all were attending school. Thus, in addition to the surveillance of the research team, these children were observed by their parents, teachers, school nurses and family physicians. From these sources, information was gathered regarding the frequency of the seizures and any undesirable effects of the test medication.

DOSAGE AND TREATMENT

Initially, meprobamate was prescribed in combination with whatever other anticonvulsant medication the patient was receiving. The younger and physically smaller children were begun on 200 mgm. three times a day or four times a day. The starting dose for the larger adolescents was 400 mgm. three times a day or four times a day. Within the next month all other medication was withdrawn gradually as the dosage of meprobamate was increased. In those patients with grand mal epilepsy, however, this technique of therapy resulted in an exacerbation of seizures. Consequently for these patients it was necessary to continue their antiepileptic drugs along with meprobamate. The patients with petit mal epilepsy and myoclonic seizures were treated with meprobamate alone. In either case the dose of meprobamate was increased until clinical benefit was achieved or toxic symptoms intervened. The maximum dose administered was 5600 mgm. daily. The average therapeutic dose was found to be 1600 to 4000 mgm. daily. There was no correlation between the optimal dose and the

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* Meprobamate (Miltown) supplied by Wallace Laboratories, New Brunswick, New Jersey.

weight of the child. Likewise, these children tolerated even the large doses of meprobamate as well as, if not better than, adult patients in another clinical trial of this drug.

THERAPEUTIC RESULTS

At the end of one year the degree of seizure control obtained with meprobamate was determined by comparing the incidence of seizures during the last month of therapy with the average monthly frequency of seizures for the six months prior to this investigation. By this method it was possible to employ the following criteria to define the anticonvulsant activity of meprobamate:

A. Marked improvement indicates more than a 75 per cent reduction in the frequency of the seizures.

B. Moderate improvement means over a 50 per cent reduction in the frequency of the seizures.

C. No improvement signifies no essential change in the patient's clinical condition.

D. Worse indicates an increase in the frequency of the seizures.

The findings in this study are summarized in Table 1. This reveals that meprobamate is not an effective anticonvulsant for grand mal epilepsy. Only one of the ten patients with grand mal seizures obtained moderate benefit when meprobamate was combined with this patient's other antiepileptic medication. The remaining patients with grand mal seizures experienced an increase in the frequency of seizures when an attempt was made to withdraw their previous anticonvulsants and substitute meprobamate. In fact, six of these patients were made worse even when the only change in their treatment consisted in the addition of meprobamate to their medication schedule. It may be concluded, therefore, that meprobamate is contraindicated in patients with grand mal seizures resulting from organic brain disease.

In contrast to the ineffectiveness of meprobamate in grand mal epilepsy and its propensity to precipitate grand mal seizures this drug proved to be quite beneficial in controlling petit mal seizures and myoclonic seizures. Of the ten patients with petit mal epilepsy, meprobamate alone produced marked improvement in four patients and moderate improvement in three patients while two patients were unimproved and one was worse. Equally impressive was the reduction of myoclonic seizures by meprobamate. The drug caused a marked improvement in one patient and moderate improvement in three patients. Only one patient with myoclonic seizures

TABLE 1
Anticonvulsant Activity of Meprobamate

Seizure Control	Grand Mal		Petit Mal		Myoclonic	
	No.	%	No.	%	No.	%
75-100% Reduction	0	0	4	40	1	20
50-75% Reduction	1	10	3	30	3	60
50% Or no reduction	3	30	2	20	1	20
Increased seizures	6	60	1	10	0	0
Total no. of patients	10		10		5	

was unimproved during this clinical trial. Thus it is apparent that meprobamate possesses anti-convulsant properties which make it an effective drug for petit mal seizures and myoclonic seizures.

SIDE REACTIONS

Meprobamate is not an innocuous compound. It may cause side effects, some of which may be quite troublesome and potentially serious, and necessitate discontinuation of the drug. The side reactions encountered in this investigation involved chiefly the central nervous system and the gastrointestinal system. Drowsiness was the most common side effect. It occurred in eight patients. Two children on large doses became ataxic. Tremor was observed in one patient and incoordination in three patients. One patient complained of abdominal discomfort, while another had anorexia. Nausea without vomiting was mentioned by three children. The most serious reaction to meprobamate was a generalized allergic dermatitis of sufficient severity to warrant immediate termination of treatment. A positive patch test confirmed this patient's sensitivity to meprobamate.

There was no direct relationship between the occurrence of these side reactions and the dosage of meprobamate with the exception that the central nervous system reactions were more likely to occur with doses in excess of 2400 mgm. daily. These neurologic and gastro-intestinal responses to meprobamate disappeared with a reduction of the dosage. They recurred when a subsequent increase of the dosage of meprobamate was tried.

Routine blood studies and urinalysis did not disclose any abnormality during the course of treatment. However, these negative findings in such a small number of patients do not permit the assumption that meprobamate has no deleterious effects on the blood forming elements. For this reason repeated blood examinations should be done in all patients receiving this drug until its safety has been established positively.

COMMENT

In addition to its anticonvulsant activity meprobamate also seems to allay anxiety in epileptic children. This was apparent even in those children who were unimproved and to some extent in the children whose epilepsy was aggravated. This mitigation of tension and anxiety undoubtedly helped to further reduce the frequency of seizures in those children in whom emotional stress triggered seizures.

No difficulty was encountered in administering meprobamate to these children. They did not object vociferously even when side reactions occurred, probably because immediate relief followed reduction of the dose. The absence of visual disturbances, which some of the children with petit mal seizures experienced with other anticonvulsants, pleased this group of patients.

This preliminary clinical evaluation suggests that meprobamate has advantages over other anticonvulsant drugs for petit mal epilepsy and myoclonic seizures. However, because of the relatively small number of patients in this study, a more comprehensive clinical trial is needed to further validate these findings.

SUMMARY

To evaluate the anticonvulsant effectiveness of meprobamate this drug was administered to twenty-five previously uncontrolled epileptic children. Ten of these children were subject to grand mal seizures; ten had petit mal seizures, and five had myoclonic seizures. After one year the degree of seizure control obtained with meprobamate was determined by comparing the incidence of seizures during the last month of therapy with the average monthly frequency of seizures for the six months prior to this investigation.

Meprobamate is of little value for grand mal epilepsy since it made six of the ten children worse; had no effect on three and produced moderate relief in only one. By contrast, this drug is effective in reducing the frequency of petit mal seizures and myoclonic seizures. Seven of the ten children with petit mal seizures were benefited by this drug. Four of five children with myoclonic seizures were improved. The average therapeutic dose was found to be 1600 mgm. to 4000 mgm. daily.

The side reactions which occurred involved chiefly the central nervous system and the gastro-intestinal system. These toxic reactions disappeared with a reduction of the dosage of meprobamate. One patient had a severe generalized dermatitis which required immediate termination of treatment. A patch test showed this patient to be sensitive to meprobamate. Otherwise, this drug was well tolerated and easily administered to the children.

Meprobamate has some advantages over other anticonvulsants for the minor convulsive disorders of children such as the allaying of anxiety, tension and the absence of visual disturbances.

BIBLIOGRAPHY

1. BERGER, F. M.: The anticonvulsant activity of carbamate esters of certain 2,2-disubstituted-1,3-propanediols. *Journ. Pharmacology and Experimental Therapeutics*, **104**(2), February, 1952.
2. BERGER, F. M.: The pharmacological properties of 2-methyl-2-n-propyl-1,3-propanediol dicarbamate (Miltown), a new interneuronal blocking agent. *Journ. of Pharmacology and Experimental Therapeutics*, **112**(4), December, 1954.
3. HENDLEY, C. D., LYNES, T. E. AND BERGER, F. M.: Effect of 2-methyl-2-n-propyl-1,3-propanediol dicarbamate (Miltown) on central nervous system. *Proceedings of the Society for Experimental Biology and Medicine*, **87**: 608-610, 1954.

EFFECT OF CHEMOTHERAPEUTIC AGENTS ON NITROGENOUS AND PHENOLIC CONSTITUENTS OF RAT URINE*†‡

E. G. SCHMIDT, Ph.D., JEAN GARDENIER, B. S., AND G. KESSLER, Ph.D.

The manner in which chemotherapeutic compounds act as growth promotants and as antibacterial agents remains largely a matter of conjecture (1). One theory suggests that the antibiotic suppresses organisms that cause "disease," usually in too mild a form to be recognized as such, and also organisms that normally destroy valuable nutrients or produce toxic putrefactive materials in the intestines. Observations on the effect of 3-nitro-4-hydroxyphenylarsonic acid, chlortetracycline hydrochloride and bacitracin, when added to the diet of rats, on the formation and excretion of urinary phenols, aromatic hydroxy acids, amino acid nitrogen, ammonia, and total nitrogen are reported in this paper.

MATERIALS AND METHODS

Two female rats, each weighing about 200 gm., were housed in individual metabolism cages designed to permit collection of urine free from contamination by feces or feed. Each cage was placed in a large 9 inch glass funnel which contained a fine wire screen and 2 inverted watch glasses (2 and 4 inches in diameter). Feces were removed daily from the screen. The urine was collected under toluene. The pooled urine was transferred to the refrigerator twice daily and collected into consecutive 48 hour specimens. The volume (60-130 ml.) varied with the diet and temperature. Watch glasses and funnels were washed down with small portions of water which were added to the urine. The samples were diluted to 100 ml., if necessary, and centrifuged. The animals were fed rapidly twice daily in separate boxes to avoid feed contamination. Drinking water was always available. Each chemotherapeutic compound was mixed with Hunt Club Lab Chow (Animal Foundation, Inc., of Sherbourne, N. Y.) in amounts usually present in commercial supplemented feeds.

DETERMINATION OF VARIOUS URINARY NITROGENOUS CONSTITUENTS

While several methods are available for the determination of urinary amino acid nitrogen, each yields different values (2). In the present work, analyses were made by three procedures: (a) the copper method of Pope and Stevens as modified by Albanese and Irby (3) and (b) by two aeration-colorimetric procedures devised by us in which the ammonia and volatile amines are removed from alkalized urine by aeration (4). Tube A contained 15 ml. of 20 per cent sulfuric acid, tube D 15 ml. of 10 per cent sodium hydroxide, and tube C 15 ml of N/100 hydrochloric acid and two drops of

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* From the Department of Biological Chemistry, School of Medicine, University of Maryland, Baltimore, Maryland.

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‡ The authors are indebted to Patricia Thorpe, Shirley Cox, Elizabeth Shaw, Flo Councill, and Arlie Parker for valuable assistance.

methyl red. Three ml. of urine were diluted to 30 ml. and adjusted to pH 10.5 with N sodium hydroxide. Then 10 ml. were transferred to tube B. One ml. of antifoam mixture (1 volume of caprylic alcohol and 4 volumes of ethyl alcohol) was added to each tube and the apparatus aerated rapidly for two hours. When the ammonia was being determined, the contents of tube C was back-titrated with N/100 sodium hydroxide after aeration.

Two 3 ml. aliquots of the dilute aerated urine were just acidified to phenolphthalein with N/10 sulfuric acid and then made faintly alkaline. One ml. of sodium borate solution was added and the amino acid nitrogen analysis then completed according to the directions of Sahyun (5). Amino acid nitrogen was also determined by the Russell (6) modification of the Sahyun procedure. In the latter procedure 1 ml. of an acid formaldehyde solution replaces the usual acetic acid-acetate reagent and 0.05 M sodium thiosulfate, the 4 per cent solution. Prior to the addition of these solutions, 10 ml. of water were added to each tube to prevent the development of turbidity. The contents were diluted to 25 ml. and read in the colorimeter against a similarly treated standard amino acid solution (6).

For total nitrogen estimations, 5 ml. of urine were diluted to 100 ml. and 5 ml. of the diluted urine then rediluted to 100 ml. Two 5 ml. aliquots were then digested, nesslerized, and read in the photometer against an ammonium sulfate standard.

DETERMINATION OF VOLATILE PHENOLS AND AROMATIC HYDROXY ACIDS

Two fractions were obtained by ether extraction of hydrolyzed urine at pH 10 (volatile phenols) and then at pH 1 (aromatic hydroxy acids). The extracts were analyzed by a diazotized p-nitroaniline procedure (7) and also by an adaptation of the blood phenol method (8) which utilizes the Folin-Ciocalteu reagent (9).

Four 5 ml. aliquots of urine were made up to approximately pH 0 with 10 ml. of 10 N sulfuric acid and 40 ml. of water and refluxed gently for 1 hour. Each hydrolysate was adjusted to pH 10 at a volume of 200 ml., and a 40 ml. aliquot was transferred to a coaxial extraction tube (7).

A glass bead and about 10 ml. of ether were added to each of four 25 ml. receiver flasks. Two of these flasks were attached to coaxial extraction tubes by standard taper joints and rapid extraction was instituted. The diazotized p-nitroaniline procedure for the analysis of these extracts is described elsewhere (7).

Our newer procedure utilizing the Folin-Ciocalteu reagent was carried out as follows. Five ml. of distilled water were added to each of the other two receiver flasks which were attached to the extraction tubes. The flasks were immersed in beakers of hot water on hot plates and rapid extraction was instituted for 2½ hours. The flasks were then replaced by smaller flasks each containing a bead, 1 ml. of water and about 3 ml. of ether. Extraction was then continued for an additional hour. Weakly acidic phenols and neutral substances were extracted at pH 10. The contents in the extraction tubes were brought to pH 1 with 1 ml. of 10 N sulfuric acid. Extraction was resumed as described above. The more acidic materials were then extracted.

The various receivers were immersed in hot water to evaporate the ether while the contents were continuously agitated. Twenty ml. of water were added to the large and

TABLE 1
*Recovery of Phenols and Aromatic Hydroxy Acids Extracted at Various pH**

Compound Extracted	pH of the Solutions and Per Cent Recovery					
	a		b		c	
	pH 8	pH 1	pH 9	pH 1	pH 10	pH 1
p-Cresol	103	—	103	—	101	—
Phenol	98	—	98	—	96	—
Resorcinol	90	4	80	5	70	14
Catechol	15	15	12	8	10	8
p-Hydroxybenzoic acid	4	99	3	101	2	103
p-Hydroxyphenylacetic acid	1	100	1	98	1	97
p-Hydroxyphenyllactic acid	2	94	3	93	3	95
p-Hydroxycinnamic acid	4	103	2	105	2	105
m-Hydroxybenzoic acid	3	103	1	103	2	105
o-Hydroxybenzoic acid	4	96	5	98	4	98

* 0.2 mg./40 ml. was extracted in each case except o-hydroxybenzoic acid (2 mg.) where hydrogen bonding causes poor color formation.

4 ml. to the small receiver flasks. Two 5 ml. aliquots of the former and the entire contents of the latter were transferred to test tubes. A blank was prepared by evaporating 3 ml. of ether from 5 ml. of water. Then 0.5 ml. of the Folin-Ciocalteu reagent and 1 ml. of 20 per cent sodium carbonate (prepared from anhydrous powder, 'Baker Analyzed' Reagent, low in iron) were added. All tubes were immersed in boiling water for exactly one minute and then immediately in cold water. The readings were made in a Klett-Summerson photometer (no. 66 red filter—640–700 $m\mu$.) with the blank set at zero.

Measured quantities (0.2 mg./40 ml.) of various phenolic compounds were extracted individually, first at pH 8, 9, or 10, respectively, and then at pH 1, and the extracts were analyzed as outlined above with the Folin-Ciocalteu reagents. The data are given in Table 1. Satisfactory recovery values are indicated, except for resorcinol and catechol which are unstable in alkaline solution. When known mixtures of p-cresol and p-hydroxyphenylacetic acid were extracted at pH 10 and pH 1, recovery values ranged from 95–102 per cent. During extraction of alkalized urine hydrolysates, volatile phenols may circulate between the receiver and the extraction tube (10). Although volatile phenols can be fixed in the receiver with dilute sodium hydroxide, this procedure causes lower values when rat urine is extracted.

The values for the phenol fraction were obtained from a standard curve developed with the Folin-Ciocalteu reagent from solutions of phenol-p-cresol prepared by appropriate dilution of a stock solution containing 10 mg. of phenol and 40 mg. of p-cresol per 100 ml. The values for the aromatic hydroxy acid fraction were obtained in a similar manner from a stock solution containing 16.67 mg. of p-hydroxybenzoic and 50 mg. of p-hydroxyphenylacetic acid per 100 ml. These mixtures were used since the colors they gave with diazotized p-nitroaniline matched the colors obtained with this reagent on urine extracts (7, 11).

TABLE 2

*Effect of Feeding Chlortetracycline Hydrochloride on the Nitrogenous and Phenolic Constituents of Rat Urine**

Dates	Drug	Phenols		Aromatic Hydroxy Acids		Amino Acid Nitrogen			Ammonia Nitrogen	Total Nitrogen
		Folin-Ciocalteu reagent	Diazotized p-nitroaniline	Folin-Ciocalteu reagent	Diazotized p-nitroaniline	Copper method	Sahyun method	Russell modification		
	mg. %									
2/2-4	0	13.2	10.0	14.1	—	28.3	17.4	17.8	53	1678
4-6	0	13.1	9.8	14.6	12.9	34.5	20.0	20.0	87	1631
7-9	0	12.0	—	14.2	—	35.6	17.1	18.5	81	1608
9-11	0	14.3	11.0	12.7	10.4	30.9	16.1	16.5	56	1553
11-13	10	10.2	—	11.1	—	29.6	16.3	16.6	69	1634
14-16	10	6.1	5.1	12.0	12.5	30.1	20.8	20.8	68	1598
16-18	10	6.9	—	13.6	—	27.8	22.2	22.6	40	1712
18-20	10	7.7	5.3	13.5	13.8	27.7	20.0	20.5	62	1445
23-25	10	9.9	7.1	19.4	15.0	33.8	19.5	21.3	64	1811
25-27	10	9.8	—	15.5	13.0	28.5	—	—	—	—
27-29	10	10.0	8.0	17.2	15.9	31.0	—	—	—	—

* Diet consisted of 56 gm. Hunt Club Lab Chow/2 rats/48 hours. Analytic values are expressed as mg./2 rats/48 hours; phenols as phenol-p-cresol (1:4) and aromatic hydroxy acids as p-hydroxybenzoic-p-hydroxyphenylacetic acid (1:3); amino acid, ammonia, and total nitrogen as mg. of nitrogen.

TABLE 3

*Effect of Feeding Bacitracin on the Nitrogenous and Phenolic Constituents of Rat Urine**

Dates	Drug	Phenols Folin-Ciocalteu Reagent	Aromatic Hydroxy Acids Folin-Ciocalteu Reagent	Amino Acid Nitrogen			Ammonia Nitrogen	Total Nitrogen
				Copper method	Sahyun method	Russell modification		
	mg. %							
10/18-20	0	10.0	11.2	26.9	16.3	16.3	60	1179
20-22	0	8.5	13.0	28.0	17.0	17.3	70	1289
24-26	10	8.7	12.8	—	—	—	—	1214
26-28	10	10.9	15.3	25.1	16.0	15.8	63	1256
28-30	40	7.8	10.0	—	—	—	—	1289
31-11/2	40	12.0	10.4	28.2	18.1	17.1	55	1265
11/2-4	40	13.0	13.0	25.7	16.9	16.6	67	1256
4-6	40	10.2	14.1	—	—	—	—	—
7-9	40	11.3	13.4	28.0	17.1	16.8	70	1445
9-11	0	12.7	15.8	—	—	—	—	1471
11-13	0	11.3	12.8	25.5	16.2	15.3	66	1428
								1420

* Diet consisted of 52 gm. Hunt Club Chow/2 rats/48 hours. Analytic values are expressed as mg./2 rats/48 hours; phenols as phenol-p-cresol (1:4) and aromatic hydroxy acids as p-hydroxybenzoic-p-hydroxyphenylacetic acid (1:3); amino acid, ammonia and total nitrogen as mg. of nitrogen.

Ten 5 ml. aliquots of a sample of rat urine were analyzed. Standard deviation for the phenol-p-cresol fraction was ± 0.625 , per cent standard deviation ± 5.75 ; the aromatic acid fraction was ± 0.62 and ± 5.80 , respectively. The addition of 3-nitro-4-hydroxyphenylarsonic acid, chlortetracycline hydrochloride or bacitracin to urine did not interfere with any of the analytical procedures.

RESULTS AND CONCLUSIONS

The analytical data obtained in the experiments with diets supplemented with chlortetracycline and bacitracin are given in Tables 2 and 3. Since the results obtained with 3-nitro-4-hydroxyphenylarsonic acid were essentially negative, detailed data have been omitted. Amino acid nitrogen values by the copper method were somewhat higher than those obtained with the Sahyun (5) and Russell (6) methods on urines which were made ammonia-free by aeration. The latter two methods, however, gave almost identical values.

The averaged data (mg. nitrogen per 2 rats per 48 hours) summarized below definitely show that ingestion of chow supplemented with these chemotherapeutic compounds did not influence significantly amino acid nitrogen, ammonia, or total nitrogen levels in the urine:

Exp.	Drug in Feed	Mg. %	No. of Urines Analyzed	Amino Acid Nitrogen			Ammonia Nitrogen	Total Nitrogen
				Copper method	Sahyun method	Russell method		
A	Chlortetracycline hydrochloride	0	4	32.8	17.7	19.8	69	1618
		10	10	30.0	19.8	20.4	61	1640
B	Bacitracin	0	2	27.4	16.6	16.8	65	1234
		40	7	27.0	17.0	16.6	64	1314
C	3-Nitro-4-hydroxyphenylarsonic acid	0	3	19.3	16.7	16.7	35	1299
		10	10	17.8	16.8	16.8	37	1328

It is obvious that ingestion of these drugs in Lab Chow complete in all essential dietary elements did not produce a decrease in amino acid nitrogen, ammonia, or total nitrogen excretion. This effect could be expected if growth stimulation had occurred. Our data are in accordance with the concept that growth stimulation in the rat by antibiotics does not usually occur unless a vitamin is lacking from an otherwise complete diet.

Values for the phenolic and aromatic hydroxy acid fractions by the two methods ran parallel although the diazotized p-nitroaniline procedure generally gave slightly lower values than those obtained with the Folin-Ciocalteu reagents. The ingestion of bacitracin and 3-nitro-4-hydroxyphenylarsonic acid did not influence materially the rate of formation and excretion of volatile phenols or aromatic hydroxy acids. However, the addition of 10 mg. per cent of chlortetracycline hydrochloride to the diet produced a marked reduction in urinary volatile phenols—the average level dropped from 13.2 to a minimum of 6.1 mg. phenol-p-cresol (1:4) per 2 rats per 48 hours, as measured by the Folin-Ciocalteu reagent, in 6 days. This decrease was relatively

transient, however, and formation and excretion of the volatile phenols returned to normal levels within 12 days after drug ingestion had been instituted.

A significant change in the excretory level of the aromatic hydroxy acid fraction, however, was not observed. Thus the average values before and during chlortetracycline feeding were: high 14.6, low 12.7, average 13.9; and high 19.4, low 11.1, average 14.7 mg. of p-hydroxybenzoic-p-hydroxyphenyl-acetic acid (1:3), respectively. Similar results were obtained with this antibiotic in a second experiment (data omitted).

Since these compounds gave different results in regard to the volatile phenols, it seems probable that each antibiotic exerts its own specific effect on the microflora concerned with intestinal putrefaction. Whether this is true in such species as the weanling pig turkey poult, chick, etc., where growth rate responds favorably to antibiotic supplementation, even in case of complete, adequate diets, remains to be ascertained.

SUMMARY

The addition of chlortetracycline hydrochloride, bacitracin, or 3-nitro-4-hydroxyphenylarsonic acid to the diet of rats did not alter significantly the amount of amino acid nitrogen, ammonia, total nitrogen, or the ether-soluble aromatic hydroxy acid fraction excreted in the urine. Only chlortetracycline hydrochloride fed at the 10 mg. per cent level produced a marked decrease in the formation and excretion of volatile phenols. This effect, however, was transient, and the formation and excretion of the compounds making up this fraction returned to normal levels within 12 days.

BIBLIOGRAPHY

1. STOKSTAD, E. L. R.: Antibiotics in animal nutrition, *Antibiotics and Chemother.*, **3**: 434-441, 1952.
2. SAUBERLICH, H. E., AND BAUMANN, C. A.: The effect of dietary protein upon amino acid excretion by rats and mice, *J. Biol. Chem.*, **166**: 417-428, 1946.
3. ALBANESE, A. A., AND IRBY, V.: Determination of amino nitrogen by the copper method, *J. Biol. Chem.*, **153**: 583-588, 1944.
4. HARROW, B., WAGREICH, H., AND MAJUR, A.: *Laboratory Manual of Biochemistry*, 3rd. Ed., W. B. Saunders Company, 1950.
5. SAHYUN, M.: The determination of amino acid nitrogen in blood and urine, *J. Lab. Clin. Med.*, **24**: 548-553, 1939.
6. RUSSELL, J. A.: Note on the colorimetric determination of amino nitrogen, *J. Biol. Chem.*, **156**: 467-468, 1944.
7. SCHMIDT, E. G.: An ether extraction method for the determination of urine phenols, *J. Biol. Chem.*, **145**: 533-544, 1942.
8. SCHMIDT, E. G., McELVAIN, N. F., AND BOWEN, J. J.: *Am. J. Clin. Path.*, **20**: 253-261, 1950.
9. FOLIN, O., AND CIOCALTEAU, V.: On tyrosine and tryptophane determinations in proteins, *J. Biol. Chem.*, **73**: 627-650, 1927.
10. DEMEIO, R. II.: A microextraction procedure for phenol determination, *Science* **108**: 391-393, 1948.
11. SCHMIDT, E. G.: Urinary Phenols. IV. Simultaneous determination of phenol and p-cresol in urine, *J. Biol. Chem.*, **179**: 211-215, 1949.
12. BANKER, J. L., AND SCHMIDT, E. G.: Urinary Phenols. III. Effect of diet and phthalysulfathiazole on the urinary phenols of the dog, *J. Biol. Chem.*, **165**: 431-435, 1946.

EFFECT OF FEEDING ETHER EXTRACTS OF HYDROLYZED HUMAN URINE ON GROWING RATS*†

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The growth-promoting effect of feeding antibiotics may be correlated with their influence on the intestinal flora although the exact mode of action remains uncertain. In our laboratory Kessler (1) found that the excretion of urinary phenols by the rat may be decreased and hydroxyaromatic acids increased by the feeding of certain antibiotics. It seems possible that the stimulatory effect antibiotics exert on the pituitary-adrenal system may be related to this change in the concentration of these ether-soluble urinary constituents. Aspirin and related hydroxyaromatic acids can act in this manner (2).

Since the literature failed to yield any pertinent data as to the effect of the addition of ether extracts of hydrolyzed human urine to the diet of growing animals, and since this information would be essential for further experimentations in this field, the following experiment was performed.

EXPERIMENTAL PROCEDURE

A 24-hour specimen of human urine was adjusted to pH 0 with sulfuric acid and open-heated on a steam bath for 5 hours. The hydrolysate was changed to pH 10 with sodium hydroxide and extracted continuously with freshly distilled ether until a test sample of the extract was phenol-free. This extract which contained volatile phenols and neutral materials was discarded. The residue was adjusted to pH 1 with sulfuric acid and again extracted continuously (3) until free of hydroxyaromatic acids. Water was added to the extract, the ether volatilized and the aqueous residue again extracted at pH 10 and 1. Five 24-hour specimens of human urine (male and female, about 6000 ml.) were treated in this manner.

This pooled ether extract was assayed (4) for its content of phenolic acids and then sprayed onto pulverized Hunt Club Lab Chow at a level of 80 mg. of phenolic acid (calculated as p-hydroxyphenylacetic acid) per 100 gm of feed. The ether was allowed to evaporate and the feed then thoroughly mixed. The control feed was treated similarly with freshly distilled ether. Sprague-Dawley female rats were housed in individual cages. Food and water were given *ad libitum* for 14 days, and the rats were weighed twice weekly. Experimental details are described elsewhere (5).

RESULTS AND DISCUSSION

For the 6 control rats the average initial weight was 125.5 gm. (± 2.11), final weight 167.7 gm. (± 2.34) and weight gain 42.2 gm. (± 1.35) (figures in parentheses

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are standard error of the mean). Total feed consumed average 194 gm. (± 2.38) and the feed efficiency value (total feed consumption divided by total weight gain) averaged 4.61 (± 0.15). For the 6 rats on the supplemented diet the average initial weight was 126 gm. (± 1.16), final weight 160.8 gm. (± 2.24) and weight gain 34.8 gm. (± 1.76). Total feed consumed averaged 186.7 gm. (± 1.50), and the feed efficiency value 5.36 (± 0.25).

The average difference in total weight gain between the control and experimental rats is -7.4 gm. or -12.3% ; the corresponding average difference in feed efficiency values is -0.75 or -16.3% . These values are statistically significant by the "t test" and show that the ether-soluble acid fraction of hydrolyzed human urine was slightly toxic to growing rats. This influence on growth and food consumption may represent the ultimate effect of growth stimulatory and inhibitory factors present in the ether extract.

SUMMARY

An ether extract of hydrolyzed human urine, free from volatile phenols but containing a mixture of aromatic and other organic acids, was slightly toxic when fed to growing rats.

BIBLIOGRAPHY

1. KESSLER, G.: Effects of chemotherapeutic agents on growth, urinary phenols, and aromatic acids. Univ. Microfilms (Ann Arbor, Mich.) Publ. No. 11, 886; Dissertation Abstr., **15**: 845, 1955.
2. CRONHEIM, G., KING, J. S., JR., AND HYDER, N.: Effect of salicylic acid and similar compounds on the adrenal-pituitary system, *Proc. Soc. Exper. Biol. & Med.*, **80**: 51-55, 1952.
3. SCHMIDT, E. G.: Urinary phenols, IV. The simultaneous determination of phenol and p-cresol in urine, *J. Biol. Chem.*, **179**: 211-215, 1949.
4. SCHMIDT, E. G., McELVAIN, N., AND BOWEN, J. J.: Plasma amino acids and ether-soluble phenols in uremia, *Am. J. Clin. Path.*, **20**: 253-261, 1950.
5. KESSLER, G., VANDERLINDE, R. E., AND SCHMIDT, E. G.: Effect of 3-nitro-4-hydroxyphenylarsonic acid on growth of rats, *Antibiotics & Chemother.*, **4**: 511-513, 1953.

AMODIOQUIN (CAMOQUIN) IN THE TREATMENT OF DISCOID LUPUS ERYTHEMATOSUS

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The mode of action of anti-malarial drugs in discoid lupus erythematosus is obscure, but the therapeutic efficacy of these compounds has been established. Since 1951, when Page (1) reported his observations on the use of mepacrine (Atabrine®), many articles have been published attesting to the value of quinacrine (2-5), chloroquine (6-9), and plaquenil (10).

One of the major objections to mepacrine (Atabrine) therapy is the deposition of yellow pigment in the skin and the occasional development of a lichenoid eruption which simulates lichen planus (11). One instance of fatal aplastic anemia following the use of mepacrine has been reported (12). Disturbances of the hemopoietic system and porphyria (13) have been noted during the administration of chloroquine for discoid lupus erythematosus. These reactions, among others, have led to the use of amodioquin (Camoquin®) and anti-malarial drugs, in the treatment of discoid lupus erythematosus. During preliminary trials amodioquin appeared to be of some value (14). This report concerns the experiences of the authors with orally administered amodioquin in the treatment of 22 patients with discoid lupus erythematosus.

THE STUDY

Patient Selection: The patients in this study were all adults, ranging in age from 26 to 45 years. They included 6 white men, 4 negro males, 8 white women and 4 Negro women. Patients were obtained from the authors' private practices and the out-patient department of the University Hospital. Three patients stated that lesions had been present for less than a year, 6 had lesions for 1 to 4 years, and 13 stated the eruption had been present for more than 5 years. None of the patients had received gold therapy during the past 5 years, but 3 had been treated with intramuscular bismuth subsalicylate during this period. Of the 9 patients who had taken other anti-malarial drugs, three had not responded to quinacrine but had received some benefit from chloroquine. Eight patients benefitted to some extent from one or another of these medications, but suffered exacerbations of the eruption after discontinuing medication.

The Drug: Amodioquin (Camoquin®) used in this study was supplied in the form of 0.2 gram scored compressed tablets for oral administration.

Method: In the authors' opinion discoid lupus erythematosus and systemic lupus erythematosus are variants of the same disease complex, therefore, the diagnosis of discoid lupus erythematosus was established in each of the patients included in this report by laboratory studies. These routine studies included histopathologic findings, blood studies, examination for L. E. cell phenomenon, and albumin-globulin ratio.

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TABLE 1

Twenty-Two Adults with Discoid Lupus Erythematosus, Treated with Amodioquin (Camoquin) for 5 to 18 Weeks

Duration	No. Patients	Previous Therapy	Results of Treatment with Amodioquin			Adverse Reaction
			Good	Fair	Failure	
3 to 12 months	3	None, or other anti-malarial drugs	3*	None	None	None
1 to 4 years	6	Other anti-malarial drugs, gold, bismuth	4†	2	None	Slight vertigo (one patient)
5 years or longer	13	Other antimalarial drugs, gold, bismuth	8†	5	None	Slight vertigo (one patient)

* Objective improvement in all lesions with macroscopic disappearance of small or recent lesions.

† Objective improvement with reduction in erythema and size of lesions.

Patients were observed at weekly intervals. Notation of objective changes were made and patients were questioned as to subjective symptoms. Hematologic studies and urinalyses were done monthly to determine any possible adverse reaction.

Dosage Schedule: Each patient received 0.2 gram amodioquin 3 times daily after meals for 2 weeks, then 0.2 gram twice daily. Duration of therapy ranged from 8 to 54 weeks.

RESULTS

(See Table 1)

Improvement in all lesions and complete macroscopic involution of some smaller or recent lesions was noted in 15 of the 22 patients. Reduction in erythema and in the size of the lesions was observed in 7 patients treated with amodioquin. Complete macroscopic involution of lesions did not occur in any of these 7 patients. In all instances the atrophic scar formation was persistent.

Reactions: Two patient complained of slight giddiness while taking the drugs. No hematologic disturbances were encountered, nor were other untoward reactions noted.

SUMMARY AND CONCLUSIONS

Twenty-two adults with discoid lupus erythematosus were treated with amodioquin for 8 to 54 weeks.

Partial involution of lesions was noted in 7 patients, and almost complete involution of lesions was noted in 15 patients.

No serious adverse reactions were noted during the period of amodioquin treatment.

Amodioquin (Camoquin®) is an effective drug in the treatment of discoid lupus erythematosus.

BIBLIOGRAPHY

1. PAGE, F.: Treatment of lupus erythematosus with mepacrine, *Lancet* **2**: 755-758 (Oct. 27) 1951.
2. CRAMER, J. A. AND LEWIS, G. M.: Atabrine in treatment of discoid lupus erythematosus, *J. Invest. Dermat.* **19**: 393-395 (Dec.) 1952.
3. SAWICKY, H. H.; KANOF, N. B., SILVERBERT, M. G., BRAITMAN, M. AND KALISH, B.: Quinacrine hydrochloride (Atabrine Hydrochloride) for chronic discoid lupus erythematosus. *J. Invest. Dermat.* **19**: 397-404 (Dec.) 1952.
4. WELLS, G. C.: Treatment of chronic discoid lupus erythematosus with Atabrine, *J. Invest. Dermat.* **19**: 405-407 (Dec.) 1952.
5. SOMMERVILLE, J.; DEVINE, D. C. AND LOGAN, J. C. P.: Lupus erythematosus treated with mepacrine. *Brit. J. Dermat.* **64**: 417-419 (Nov.) 1952.
6. GOLDMAN, L.; COLE, D. P. AND PRESTON, R. H.: Chloroquine diphosphate in treatment of discoid lupus erythematosus, *J.A.M.A.* **152**: 1428-1429 (Aug. 8), 1953.
7. HARVEY, G. AND COCHRANE, T.: Treatment of lupus erythematosus with chloroquine Sulfate, *J. Invest. Dermat.* **22**: 89-91 (Feb.), 1954.
8. PRAKKEN, J. R. AND MOLHUYSEN - van der Walle, S. M. C.: Treatment of chronic lupus erythematosus with chloroquine, *Dermatologica* **108**: 198-201 (March), 1954.
9. ROGERS, J. AND FINN, O. A.: Synthetic antimalarial drugs in chronic discoid lupus erythematosus and light eruptions, *A. M. A. Arch. Dermat. & Syph.* **70**: 61-66 (July) 1954.
10. CORNBLEET, T.: Discoid lupus erythematosus treated with plaquenil, *A. M. A. Arch. Dermat. & Syph.* **73**: 572-575 (June) 1956.
11. BAZEMORE, J. M.; JOHNSON, H. H.; SWANSON, E. R. AND HAYMAN, J. M.: Relation of quinacrine hydrochloride to lichenoid dermatitis (Atypical lichen planus) *Arch. Dermat. & Syph.* **54**: 308-324 (Sept.) 1946.
12. PARMER, L. G. AND SAWITSKY, A.: Fatal aplastic anemia following quinacrine therapy in chronic discoid lupus erythematosus, *J. A. M. A.* **153**: 1172-1174 (Nov. 28) 1953.
13. LINDEN, I. H.; STEFFEN, C. G.; NEWCOMER, V. AND CHAPMAN, M.: Development of porphyria during chloroquine therapy for chronic discoid lupus erythematosus, *California Med.* **81**: 235-238 (Sept.) 1954.
14. LEEPER, R. W. AND ALLENDE, M. F.: Antimalarials in the treatment of discoid lupus erythematosus. *A. M. A. Arch. Dermat. & Syph.* **73**: 50-57 (Jan.) 1956.

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THE SURGERY OF DUODENAL ULCER*

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The surgery for any clinical condition involves the past, the present, and predictions for the future. This is indeed true for duodenal ulcer.

The history of the surgery of duodenal ulcer is essentially that of the last 75 years. The advent of antiseptics with Lister in 1867 enabled surgeons to explore the peritoneal cavity and within 14 years, peptic ulcer was being treated surgically by gastrojejunostomy as introduced by Wöhrer in 1881 (N.B., also 14 years before Röntgen). While gastric resection was introduced by Billroth in 1881 (Billroth I: resection with gastroduodenal anastomosis) and in 1885 (Billroth II: resection with gastrojejunal anastomosis), such resections were first for gastric carcinoma, later for gastric ulcer, and only in 1915 (von Haberer in Germany and Strauss in Chicago) was gastric resection introduced for the treatment of duodenal ulcer. Although gastric resection was quickly adopted for this purpose by the German surgeons, gastrojejunostomy was the method of choice in almost all of the American clinics until at least 1925 and in some eastern institutions until 1940. During the decade 1930-1940, therefore, gastric resection was the operation of choice in all but the most reactionary of the better clinics in this Country and in almost all European clinics for the surgical treatment of duodenal ulcer. Such resections in this Country almost invariably were *ad modum* Billroth II; in Europe some were also *ad modum* Billroth I.

In 1942, vagotomy was introduced by Dragstedt of Chicago. It is true that vagotomy had been done by others but such earlier vagotomies were incomplete (e.g., at the level of the pylorus) or were in the neck, affecting the heart as well as the stomach. Soon vagotomy was combined with gastrojejunostomy (Dragstedt) and later with pyloroplasty (Weinberg, of Long Beach).

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More recently, Wangensteen, of Minneapolis, introduced an operation involving wedge resection of the corpus, leaving the antrum intact, but reanastomosing the upper stump of the corpus to it in continuity and performing a pyloroplasty for drainage. The pyloroplasty is necessary because while the remaining corpus is not vagotomized, the antrum is vagally denervated because of the resection above. Such a corpal wedge resection with pyloroplasty we have termed the Wangensteen I. Soon afterwards, Wangensteen introduced the Wangensteen II (longitudinal tubular resection with transverse gastroplasty, i.e., resection of the greater curvature followed by transverse closure of the defect). In 1956, Wangensteen stated that he had abandoned the II and had reverted to the Wangensteen I.

Another trend, beginning after the second World War, was the reintroduction in this Country of the Billroth I in preference to the Billroth II for the surgical treatment of duodenal ulcer. The I was originally abandoned by Billroth because of leakage at the fatal angle, or "Jammerecke", and later by most of those who tried it in this Country because of a high incidence of stomal ulcer. The present day advocates of the Billroth I believe, however, that both of these difficulties can be obviated; the former by modern suture technics and the latter by a combination of (a) mobilization of the duodenum (introduced by Kocker in 1903), (b) adequate gastric resection measured quantitatively by patterns or other such means, and (c) by utilization of the Finney-von Haberer end-to-side gastroduodenostomy after resection when the duodenum is markedly indurated, closing the duodenal stump as with a Billroth II in such instances.

The situation at present is, therefore, much more complicated than it was 20 years ago when gastric resection *ad modum* Billroth II was almost unopposed as the operation of choice for the surgical treatment of duodenal ulcer. Now at least 4 other procedures have strong supporters advocating their advantages: (1) Vagotomy with either gastrojejunostomy or pyloroplasty, (2) Gastric resection *ad modum* Billroth I, (3) Wedge resection of the corpus with pyloroplasty *ad modum* Wangensteen I, and (4) Hemigastrectomy combined with vagotomy.

It should be pointed out at this time that while there is argument as to *which* operation is the one of choice, there is no argument that in the majority of cases of duodenal ulcer medical treatment is preferable to any operation. Surgical treatment is still advised only for the four main complications of duodenal ulcer: obstruction, perforation, massive or continued hemorrhage, and intractability to or incompatibility with good medical treatment. Fortunately, the problem of malignant change is not of practical importance in duodenal ulcer as it is in the case of gastric ulcer.

The current problem of surgery for perforated duodenal ulcer, like that of duodenal ulcer in general, is not as simple as it was a few years ago. In 1947, simple closure with an omental tag was the treatment of choice in this Country. This was true despite the fact that the first successful operation for perforated ulcer was a primary gastric resection (Billroth I) by Keetley in 1902, that von Haberer in 1919 advocated primary resection as the method of choice, and that von Haberer's advice has been followed ever since in the majority of eastern European clinics. In 1957, however, in the United States, simple closure, while still the treatment of choice, does not hold the field unopposed, as there are strong advocates for primary

gastric resection and for continuous gastric suction. As to which of these 3 methods will win out in the future, no prognostication will be made at this time.

The future of surgery for duodenal ulcer in general, not just perforation, is difficult to forecast. New knowledge obtained from the experimental laboratory (it is of interest that while 30 years ago almost all work on gastric physiology was done in physiology departments, now the major portion is done in clinical departments) has influenced our thinking. From the multitude of experimental observations with possible practical application, only three will be mentioned: (1) Confirmation of Edkins' observations (1906) that an antral secretory hormone (gastrin) exists, (2) Observation of a hormonally stimulatory effect of gastrojejunostomy on gastric acid secretion, and (3) Determination of a compound opposing effect in the use of two experimental preparations, viz.: (a) vagotomy decreases acid secretion directly, but at the same time stimulates the hormonal phase of such secretion, and (b) the antrum is stimulated to form gastrin by contact with food, but acid secretion of the parietal cells of the corpus is inhibited when acid contacts the antrum: hence, the behavior of the antrum is quite different when in continuity than when not.

The observation from clinical studies is germane to the discussion that even though dumping may be less serious following the Billroth I than the Billroth II, it is still troublesome after either. While not all surgeons would agree that the incidence of dumping is proportional to the extent of resection, the weight of evidence available at present would seem to support this view. At the same time all surgeons would agree that the incidence of stomal ulcer is generally proportional to the amount of acid secreting stomach left intact after resection. Thus, the use of the Billroth resections must traverse a difficult course between the *Scylla* of inadequate resection with its danger of recurrent ulcer and the *Charybdis* of extensive resection and its attendant high incidence of unpleasant dumping symptoms.

For all these reasons, the future of surgery for duodenal ulcer may show new trends. The Billroth operations may lose their popularity. An operation leaving the antrum intact, but also in continuity with the stomach remnant may become the fashion. Vagotomy combined with conservative resection may prove to be the best procedure. On the other hand, some new operation or medical treatment, hitherto undreamed of, may be found to be superior. The future is difficult to forecast, however, and one hesitates to place himself in the position of Stephen Puget, who speaking of cardiac surgery in 1896, stated that "Surgery of the heart has probably reached the limits set by nature to all surgery; no new method and no new discovery can overcome the natural difficulties."

COMPARATIVE SERUM AND CEREBROSPINAL FLUID TRANSAMINASE LEVELS IN ACUTE CEREBROVASCULAR DISORDERS*

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INTRODUCTION

Glutamic oxalacetic transaminase (GOT) is widely distributed in animal tissues; being present in heart muscles, skeletal muscles, brain, liver, kidney, testis and lung in decreasing order (1, 2). The absence of an increase in serum transaminase activity in the presence of central nervous system disease has been attributed to the blood brain barrier (3). Recently, Wakim and Fleisher have reported a marked increase of cerebrospinal fluid transaminase, as well as some increase in serum transaminase in experimental cerebral infarction in dogs (4).

It is the purpose of this article to report cerebrospinal fluid (CSF) and serum transaminase activity in acute cerebrovascular disease and to compare these findings with other miscellaneous neurologic diseases, as well as a few observations of such activity in brain tumor patients and patients with acute liver damage.

METHOD

The determinations were made spectrophotometrically by the method outlined by Karmen (5). Specimens were stored in a frozen state and were measured within a week after being obtained. Examinations were carried out at room temperature, (25°C). Serum and CSF were tested from 20 patients with acute cerebrovascular lesions and 3 patients with acute liver damage. In addition, 5 proved and 2 suspected brain tumor cases were so tested.

TABLE 1
GOT Activity in Serum and CSF Among Control Groups

	No. of Subjects	Mean, Standard Deviation & Range (units)
Serum	10	28.9 \pm 4.4 (22-36)
CSF	30	16.8 \pm 7.6 (2-30)

Miscellaneous neurologic diseases included 8 patients with old cerebrovascular accidents, 7 with convulsive disorders, 2 with bacterial meningitis, 2 with tabes dorsalis, 2 with organic psychosis, 2 with hypertensive encephalopathy, and 1 in each of the following diseases: old subarachnoid hemorrhage resulting from aneurysmal rupture, pseudotumor cerebri, multiple sclerosis, Parkinson's disease, trigeminal neuralgia, acute porphyria and congenital hydrocephalus.

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TABLE 2
GOT Activity (Units) in Acute Cerebrovascular Accident

Clinical Diagnosis and Age	Source of sample	1st day (within 24 h.)	2nd day (within 48 h.)	3rd day (within 72 h.)	4th day (within 96h.)	5th day (within 120 h.)	1 week	2 weeks	Clinical Result
1) Thrombosis of mid. cereb. art., 74	Jugular blood Cubital blood CSF*			43 40	96	38 30	64	52 52 46	No change
2) Intracerebral hemor- rhage, 61	Jugular blood Cubital blood CSF						50 44 20 Xantho- chromic	44 48 22 (less Xanth)	Improved
3) Basilar Artery throm- bosis, 84	Jugular blood Cubital blood CSF			39			56 56 (Xanth)		Died—Cause: CVA
4) Thrombosis of mid. cereb. art., 74	Jugular blood Cubital blood CSF		43 43 14	37 28	36 34	26 22 16			Improved
5) Thrombosis of mid. cereb. art. & second- ary polycythemia, 61	Jugular blood Cubital blood CSF		46 50 32	46 53 23	59 53	54 48			Improved
6) Thrombosis of mid. cereb. art., 70	Jugular blood Cubital blood CSF	42 50 (sl. xanth.)	52	68	40 4 (incr. xanth.)	52			Died—Cause: pneumonitis

* CSF—cerebrospinal fluid

TABLE 2—Continued

Clinical Diagnosis and Age	Source of sample	1st day (within 24 h.)	2nd day (within 48 h.)	3rd day (within 72 h.)	4th day (within 96 h.)	5th day (within 120 h.)	1 week	2 weeks	Clinical Result
7) Thrombosis of mid. cereb. art., 54	Jugular blood Cubital blood CSF	46 40 20	36 50	40 56	30	40			Died—Cause: pulmonary edema
8) Ventricular hemorrhage, 56	Jugular blood Cubital blood CSF	42 42 94 (marked xanth.)							Died—Cause: CVA
9) Thrombosis of mid. cereb. art. & liver damage, 72	Cubital blood CSF	88 24	64	46	60 44	58		18	Died—Cause: cardiac disease
10) Basilar artery throm- bosis, 70	Cubital blood CSF	34 32	76	96 160	72	54			Died—Cause: CVA
11) Thrombosis of mid. cereb. art. & liver damage, 56	Cubital blood CSF	80	138 20	130	94 8	46			Improved
12) Basilar artery throm- bosis, 70	Cubital blood CSF	44	46 26	46	44 10	268			Died—Cause: Cardiac disease (?)
13) Thrombosis of mid. cereb. art., 67	Cubital blood CSF						14 22	18 12	Improved

* CSF—cerebrospinal fluid

14) Subarachnoid hemorrhage, 50	Cubital blood CSF	26 14 (sl. xanth.)	50	46	14 (increased xanth.)	24			Improved
15) Basilar artery thrombosis, 47	Cubital blood CSF	48 74	44	36 92 (xanth.)	32	24	12		Improved
16) Thrombosis of mid. cereb. art., 82	Cubital blood CSF*	34 30 (faint xanth.)	18				36 24 (clear)		Improved
17) Thrombosis of mid. cereb. art., 60	Cubital blood CSF	28 20	38	60					Died—Cause: cardiac disease (?)
18) Thrombosis of mid. cereb. art., 78	Cubital blood CSF	20 28	30	30 44 (faint xanth.)	36	54			No change
19) Thrombosis of mid. cereb. art., 55	Cubital blood CSF	8	32	40 6		40			Improved
20) Intracerebral hemorrhage, 46	Cubital blood CSF	42	40 30 (xanth.)	32	18	24			Improved

CONTROL OBSERVATIONS

Control values for serum GOT were based on 10 normal volunteers. The controls for CSF GOT were 30 patients (average age 55) with no neurologic or systemic disease who were about to receive spinal anesthesia.

RESULTS

Mean values and standard deviations among controls were 28.9 ± 4.4 u. for serum and 16.8 ± 7.6 u. for CSF (Table 1). Serum GOT levels were higher than normal in more than half of the cases with acute cerebrovascular lesions during the first five days following the onset of the illness. The greatest values appeared a few days after the onset. There was little difference whether the samples were obtained from the internal jugular veins or the extremity veins (Table 2).

Of 20 patients with acute cerebrovascular accidents, 8 showed definite elevation of CSF GOT, 5 were in upper limits of normal and 7 showed no elevation. The greatest elevation appeared within 120 hours after the onset of the illness (Table 2).

Samples from 7 patients with either proved or suspected brain tumors showed no elevation of CSF GOT except the one of suspected third ventricular tumor, with internal hydrocephalus demonstrated by air study (Table 3). Three patients with varying types of liver disease all showed elevated serum GOT and normal CSF levels (Table 4), apparently demonstrating the role of the blood brain barrier. The reverse situation is demonstrated with patients No. 1, 8, and 15 of Table 2 with normal serum GOT and elevated CSF levels. Among miscellaneous neurologic diseases most of them

TABLE 3
Brain Tumor Patients

	Serum GOT*	CSF GOT*
Proved		
Glioma		16
3rd ventricular Tumor	38	28
Glioma	40	22
Glioma	38	12
Glioma		10
Suspected		
3rd Ventricular Tumor with Hydrocephalus	44	62
3rd Ventricular Tumor		10

* Units

TABLE 4
Serum and Cerebrospinal Fluid Levels (Units) In Patients With Liver Disease

Clinical Diagnosis	Serum GOT	CSF GOT
1. Histoplasmosis	110	28
2. Sarcoidosis	241	18
3. Infectious hepatitis	116	24

TABLE 5

Cerebrospinal Fluid GOT Levels Among Miscellaneous Types of Neurologic Diseases

Clinical Diagnosis	CSF GOT	Clinical Diagnosis	CSF GOT
1) <i>Old Cerebrovascular Accidents</i>		8 Pseudotumor cerebri	4
Unilateral:	18	9 Multiple sclerosis in exacerbation	16
	28	10 Parkinson's Disease	2
	24	11 Trigeminal neuralgia	8
	26	12 Acute Porphyria	18
Bilateral:	8	13 Congenital Hydrocephalus	96
	10		
	24		
	26		
2) <i>Convulsive Disorders</i>			
Grand Mal:	5		
	18		
	8		
	10		
5 hours after the end of status epilepticus	40		
72 hours later	20		
2 hours after the end of status epilepticus	30		
Psychomotor:	12		
3) <i>Meningitis, bacterial</i>	2		
	18		
4) <i>Tabes dorsalis</i>	31		
	30		
5) <i>Organic Psychosis</i>	24		
	22		
6) <i>Hypertensive Encephalopathy</i>	7		
	30		
7) Old subarachnoid hemorrhage due to rupture of aneurysm (2 weeks after onset)	20		

showed normal CSF GOT levels. Interesting results were seen in 1 patient with congenital hydrocephalus which showed marked elevation and 2 cases of status epilepticus, one showing elevated, the other within upper limit of normal. Two cases of tabes dorsalis showed levels within upper normal limits (Table 5).

SUMMARY AND CONCLUSIONS

Elevated CSF GOT appears to indicate only acute central nervous system lesions; the blood-brain barrier effectively preventing serum transaminase, originating elsewhere, from entering the CSF. CSF GOT activity is thus more reliable than serum GOT levels for diagnosis of central nervous system lesions. Serum GOT is elevated in some of the acute CNS lesions, undoubtedly caused by damage of the blood-brain barrier. The degree of elevation of CSF GOT has been correlated in proportion to the extent of infarction (4).

Preliminary findings, although not conclusive, suggest a relationship between cerebrospinal fluid GOT levels and prognosis, i.e.:—high levels may be indicative of poor prognosis. The point is unproved and further data are needed. Whether GOT levels are helpful in differentiating brain tumor from other cerebral lesions is unsettled and needs additional study.

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REFERENCES

1. COHEN, P. P. AND HEKUIS, G. L.: Rate of transamination in normal tissues. *J. Biol. Chem.* **140**: 711-724, 1941.
 2. AWAPARA, J. AND SEALE, B.: Distribution of transaminase in rat organs. *J. Biol. Chem.* **194**: 497-502, 1952.
 3. LADUE, J. S. AND WROBLEWSKI, F.: The significance of the serum glutamic oxalacetic transaminase activity following acute myocardial infarction. *Circulation* **11**: 871-877, 1955.
 4. WAKIM, K. G. AND FLEISHER, G. A.: The effect of experimental cerebral infarction on transaminase activity in serum, cerebrospinal fluid and infarcted tissue. *Proc. Staff Meetings Mayo Clinic* **31**: 391-399, 1956.
 5. KARMEN, A., WROBLEWSKI, F. AND LADUE, J. S.: Transaminase activity in human blood. *J. Clin. Invest.* **34**: 126-133, 1955.
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THE UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE
AND COLLEGE OF PHYSICIANS AND SURGEONS

1807-1957

JOHN E. SAVAGE, M.D.

Baltimore Town at the close of the Eighteenth Century and the beginning of the Nineteenth was experiencing rapid growth in population, commerce, and shipbuilding. There are various figures reported regarding the population in 1800 which vary from 26,614 to 31,514. It is generally agreed, however, that there was an approximate one hundred and twenty-five per cent increase in ten years. Baltimore was described as the geographic center of the Republic. With world trade controlled by Great Britain and the United States because of war on the Continent of Europe, Baltimore shared in the general prosperity. Tobacco, corn, wheat, and flour were the important staple exports. Shipbuilders produced the "Baltimore Clippers" which became world famous as the fastest commercial vessels afloat. In February 1799, the Baltimore-built frigate, "Constellation", had taken the French vessel, "Insurgente".

The city mourned the death of President Washington (December 14, 1799) during whose last illness, Dr. Gustave Brown, of Port Tobacco, was called as one of the consultants. In 1800 the United States government took formal possession of the "District of Columbia", and Congress met there for the first time in November of that year.

City ordinances and State Legislature-approved measures permitted lotteries which were held to raise money for churches, schools, colleges, and all manner of civic improvements, including the Washington Monument of Baltimore (corner-stone laid in 1815), the first to be erected to the memory of George Washington.

In 1796 (the year the city was incorporated), Dr. John B. Davidge, and in 1797, Dr. Nathaniel Potter settled to practice in Baltimore. The latter year was marked by an epidemic of what was then called "inflammatory bilious fever", but which was known to be yellow fever. Epidemics of this disorder became recurrent and resulted in considerable expense, invalidism, and death. The Legislature, in 1798, appropriated \$8,000 for the erection of a Public Hospital, and an additional \$3,000 was provided as the epidemic continued. The Medical and Chirurgical Faculty of the State of Maryland was incorporated in 1799. Dr. John Crawford, having received some "vaccine virus" from London, introduced vaccination in Baltimore in 1800. The Baltimore General Dispensary was organized in 1801, by Drs. John Crawford, James Smith, Robert H. Archer, et al. Vaccination against smallpox was endorsed by the Medical and Chirurgical Faculty in 1802, the first official recognition of Edward Jenner's great discovery by any American society of physicians.

Drs. Davidge and Potter frequently discussed the founding of a medical school. Dr. Davidge lectured on midwifery, surgery, anatomy, and physiology at his residence in 1802. Since he continued these lectures annually until the formation of the College of Medicine, they were considered to be its nucleus. In the same year, the Medical and Chirurgical Faculty appointed a committee consisting of Drs. George



FIG. 1. JOHN B. DAVIDGE

Brown, John B. Davidge, James Stuart, J. C. White, and Edward Scott, to formulate a plan and secure the necessary legislation for a medical college.

The members of the faculty were confronted not only with committee duties but also with the examination of candidates for the practice of medicine and the enforcement of the medical license laws, and the prevention and treatment of the general scourges extant at that time: yellow fever, smallpox, typhoid fever, and consumption.

As a result of the efforts of the committee for the medical college, the legislature, on December 18, 1807, passed a bill creating "The College of Medicine of Maryland". This act appointed as regents the Board of Examiners of the Medical and Chirurgical Faculty, together with the president and professors of the college. Dr. John B. Davidge was named the first dean, and he, with Dr. James Cocke, were joint professors of anatomy, surgery and physiology. Dr. Thomas E. Bond was professor of materia medica, and Dr. William Donaldson, professor of the institutes of medicine. Dr. Bond soon resigned and Dr. Nathaniel Potter was appointed in his stead. The college was chartered by the state in 1808.

Public sentiment was so prejudiced against human dissection that a mob completely destroyed a small anatomic theatre which had been erected by Dr. Davidge. Therefore, in the first session of the college, practical anatomy had to be abandoned temporarily. Lectures were given at the homes of the professors and some clinical instruction was given at the Almshouse. Illness of various members of the faculty, resignations, and poor quarters were trials of the new college in its early years. Drs. Elisha DeButts and Samuel Baker were appointed to the chairs of chemistry and materia medica in 1809. In April 1810, the first public commencement was held and degrees conferred on five graduates. Additions to the faculty in 1812 were Dr. William Gibson, professor of surgery, and Dr. Richard W. Hall, adjunct professor of



FIG. 2. JOHN CRAWFORD

obstetrics, and, in the following year, professor of the diseases of women and children.

The year 1812 was of significance not only internationally and nationally, but also locally, for it marked the actual founding, by an act of the State Legislature, of the University of Maryland with the College of Medicine of Maryland as its Faculty of Physic, as well as the beginning of the construction of the present central building of the modern medical school group. By an act of the legislature, the then popular method of raising funds for its construction was evoked—a lottery—the proceeds from which were not to exceed forty thousand dollars. It is the oldest structure in this country from which the degree of doctor of medicine has been granted annually since its erection. At that time the building, modeled after the Pantheon at Rome, was located near the western boundary of the city, and provided an imposing view of the Patapsco River and the upper Chesapeake Bay, according to contemporary historians. During the session of 1813, the new building was partially occupied; and, in that year, for \$500.00, the Faculty purchased from his widow the library of the late Dr. John Crawford, consisting of over 400 volumes, which formed the nucleus of the Medical Library of the University of Maryland. It was opened for the use of the students in the fall of 1815. Apparently, the library was not extensively used nor was it well supported or adequately housed, until the purchase by the university of the old church building at the southeast corner of Lombard and Greene Streets in 1905. It was named Davidge Hall.



FIG. 3. DAVIDGE HALL

The war years hampered but did not stop the functioning of the school. The lottery failed to produce the expected revenue and the members of the faculty were pressed by their creditors, even to the point of threat of actual sale of the property by the sheriff. Such disaster was narrowly averted by the procurement of loans from several banks. These circumstances were only the beginning of repeated financial crises. Meanwhile, recurrent epidemics of smallpox and yellow fever demanded much of the professional time of many of the faculty members. Peace was declared in 1815. Other lotteries were authorized by the legislature for the medical school in 1817, with the stipulation that the income should not be greater than \$100,000.00 a year. Again the lotteries were not as productive as had been hoped, and by 1821 the state issued 30 year certificates of indebtedness, in the amount of \$30,000, to satisfy the accumulated deficit. The faculty gave bond to pay the interest but had to default, and in 1837 and 1840, the legislature came to their relief. Thus the financing of the medical school changed from private hands to the State, which has partially supported it since.

When completed, the original medical school building contained two amphitheatre-type lecture halls known as "Chemical Hall" and "Anatomical Hall". In the latter, in 1824, the degree of L.L.D. was conferred upon the Marquis de Lafayette; and in 1825, Dr. Ephraim McDowell, the "father" of ovariectomy, received the honorary Doctor of Medicine degree.

Practice Hall was erected in 1821 to house the collection of anatomic preparations, which the faculty purchased for \$8,000.00 from Dr. Granville S. Pattison who had been appointed professor of surgery in 1820. Thus was the "museum" of the University created, consisting of over a thousand normal and pathological specimens. It continued to grow by accessions in 1823, 1832, 1841 and 1861. However, by 1890, according to Cordell, it was in a "lamentable condition".

Adequate clinical instruction for its students was provided by the School of Medicine in 1823 with the erection of its own hospital, then known as the Baltimore Infirmary. It is believed that here for the first time in this country, medical students benefited by intramural residency training. There were four subsequent additions to this building which became the University Hospital.

Crises, other than financial, beset the medical school in its early years. Factions within the faculty, added to the financial straits, apparently brought the state to seize the University of Maryland in 1825. It discharged the Board of Regents and placed the school in the hands of a Board of Trustees. The Faculty of Physic, in 1837, withdrew from the control of the Trustees and formed another school, and the Regents sued for the recovery of their rights under the original charter. The Trustees, following this action, appointed a new faculty, the members of which continued the courses. The matter was brought before the Court of Appeals of Maryland, which, in 1838, decided in favor of the Regents who resumed control of the university in 1839. Other internal strife appeared in 1843, when the first member of the faculty to be impeached by his colleagues, Dr. Richard W. Hall, was accused of incompetency, and violation of regulations. He was acquitted by the Regents.

The Baltimore College of Dental Surgery, the first in the world, was organized in 1839, was incorporated in 1840, and later became the School of Dentistry of the University of Maryland. In 1840 the Maryland College of Pharmacy was organized. It was incorporated in 1841, reorganized in 1856, and became the School of Pharmacy of the University of Maryland in 1904.

The two decades, beginning in 1840, witnessed interesting events, such as the

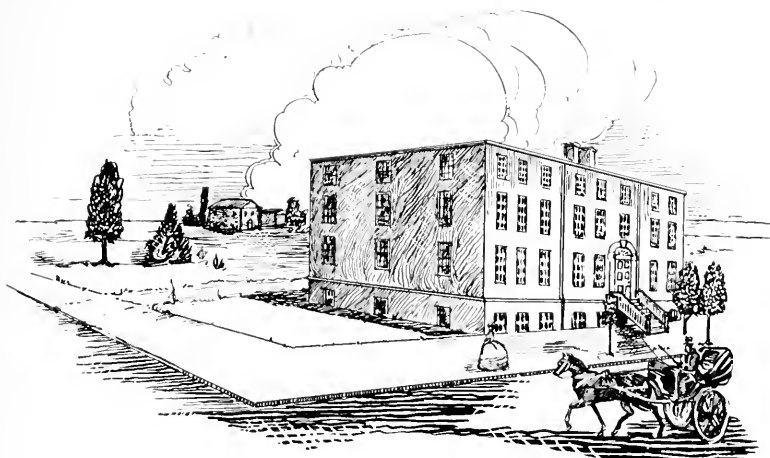


FIG. 4. BALTIMORE INFIRMARY, 1823

completion, in 1844, of the telegraph between Baltimore and Washington and the first message ever sent over wire on May 24; and in 1848, the first annual meeting of the American Medical Association was held in Baltimore upon the invitation of the Medical and Chirurgical Faculty. Among the speakers on that occasion was Oliver Wendell Holmes. Edgar Allan Poe died in 1849; and epidemics of cholera and typhus fever afflicted the city. Improvements in the medical school curriculum were taking place. In 1841 organized instruction in auscultation and percussion was given, and these aids to diagnosis were announced in the catalogue for 1845. In this year also, instruction in operative surgery was formalized. The teaching of pathology as an independent subject began in 1847. Dissection was made compulsory in 1848, and the medical school became the first or second in the country to take this step. In the same year, attendance of the students at two sessions of clinical instruction became mandatory. The next years saw recurrent epidemics of yellow fever, smallpox, scarlet fever and measles. An addition to the University Hospital was built in 1850; and in 1854 courses in experimental physiology and microscopy became integral parts of the curriculum. The Peabody Institute was founded in 1857. The population had risen from about 100,000 in 1840, to about 212,000 in 1860.

The year 1860 saw the sentiment of the people of Baltimore divided between the North and the South. The period of the Civil War (1861-1865) was a trying one with increased problems for the medical school, many of whose students came from the South. Emphasis in the curriculum was placed on military surgery and hygiene during the war years. Southern students ceased to enroll in the school and their loss was keenly felt. Members of the faculty served in the armies with distinction. Tidewater Maryland had slavery, while in the mountainous regions of the western part of the state, it was non-existent. At the end of the war, Southern students returned to the school and the enrollment again became normal. According to some writers, the charter of Washington University School of Medicine of Baltimore, which ceased to operate in 1851, was revived in 1867 by physicians and surgeons of the Confederate armies. This school merged with the College of Physicians and Surgeons in 1877.

From the end of the Civil War to 1900, numerous medical schools came into being in Baltimore. This was part of a national trend. The College of Physicians and Surgeons of Baltimore City was organized in 1872, and merged with the University of Maryland in 1915. The Baltimore Medical College was founded in 1881 and joined the University of Maryland in 1910. In 1882, the Woman's Medical College of Baltimore opened, but ceased to operate in 1910. Baltimore University School of Medicine began in 1884 and closed in 1907. The Southern Homeopathic Medical College came into being in 1890 (in 1907 its name was changed to Atlantic Medical College) and went out of existence in 1910. The year 1893 marked the opening of the Johns Hopkins University School of Medicine. A twenty year life span (1893-1913) was the lot of the Maryland Medical College of Baltimore. It will be observed that today there are two surviving medical schools in Baltimore, the School of Medicine of the University of Maryland College of Physicians and Surgeons, and the Johns Hopkins University School of Medicine. It will also be apparent that the

former began as the College of Medicine of Maryland, became the University of Maryland in 1812, and had engrafted upon it three other medical schools from 1877 to 1913.

The last quarter of the Nineteenth Century was characterized by growth, organization, and building. In 1874 the Greene Street wing of the University Hospital was completed. City Hospital (not the present Baltimore City Hospitals) in 1877 came under control of the College of Physicians and Surgeons. The Anatomy Law was enacted by the legislature in 1882, and provided legal means for the various medical schools to obtain unclaimed bodies for dissection. In a cooperative enterprise, the faculties of the University of Maryland, School of Medicine, and the College of Physicians and Surgeons, assumed joint control of the medical appointments at the Bayview Asylum (the present Baltimore City Hospitals) in 1884. At the University of Maryland, a separate Lying-In Hospital was established in 1887. During the year 1889, the Nurses' Training School Building at the University of Maryland was erected; the Johns Hopkins Hospital was opened; and the Johns Hopkins Training School for Nurses was opened.

In 1890 an important step toward the elevation of standards of medical education was taken by organized medicine. At Nashville, Tenn., during the American Medical Association meeting, the Association of American Medical Colleges was organized. At the suggestion of the Baltimore Medical Colleges, regulations providing for preliminary examination and a three year course of lectures to become obligatory upon the member colleges at the session of 1892-93, were adopted. In 1891, the three year course became compulsory at the School of Medicine, University of



FIG. 5. UNIVERSITY HOSPITAL. 1896-1934

Maryland. A new laboratory building at the university was opened in 1893. A four year course of study in medicine at the university became compulsory in 1896. The University of Maryland Hospital was completed and occupied in 1897. The year 1899 marked the centennial of the Medical and Chirurgical Faculty of the State of Maryland. Addresses by the governor and prominent physicians from many parts of the country were given as part of the exercises.

A significant event at the medical school took place in 1903, when a chair of the history of medicine was founded, the first professorship of this much-neglected department in this country. Appropriately, Dr. Eugene F. Cordell, who had devoted his life to the university and to the promotion of higher standards of medical education, was appointed to this position.

The Twentieth Century had hardly begun, when, on February 7, 1904, "The Great Fire of Baltimore" destroyed the heart of the business center of the city. It was considered the most disastrous conflagration of modern times. The fire was not declared under control until after it had spread continuously for thirty hours, during which time approximately 2,500 buildings and 75 business blocks (covering over 140 acres of ground) were consumed. Apparently a fortunate shift of the wind set the western boundary of the fire at Lombard and Howard Streets, just three blocks from the medical school and hospital buildings of the University of Maryland.



FIG. 6. CENTENNIAL CELEBRATION, 1907

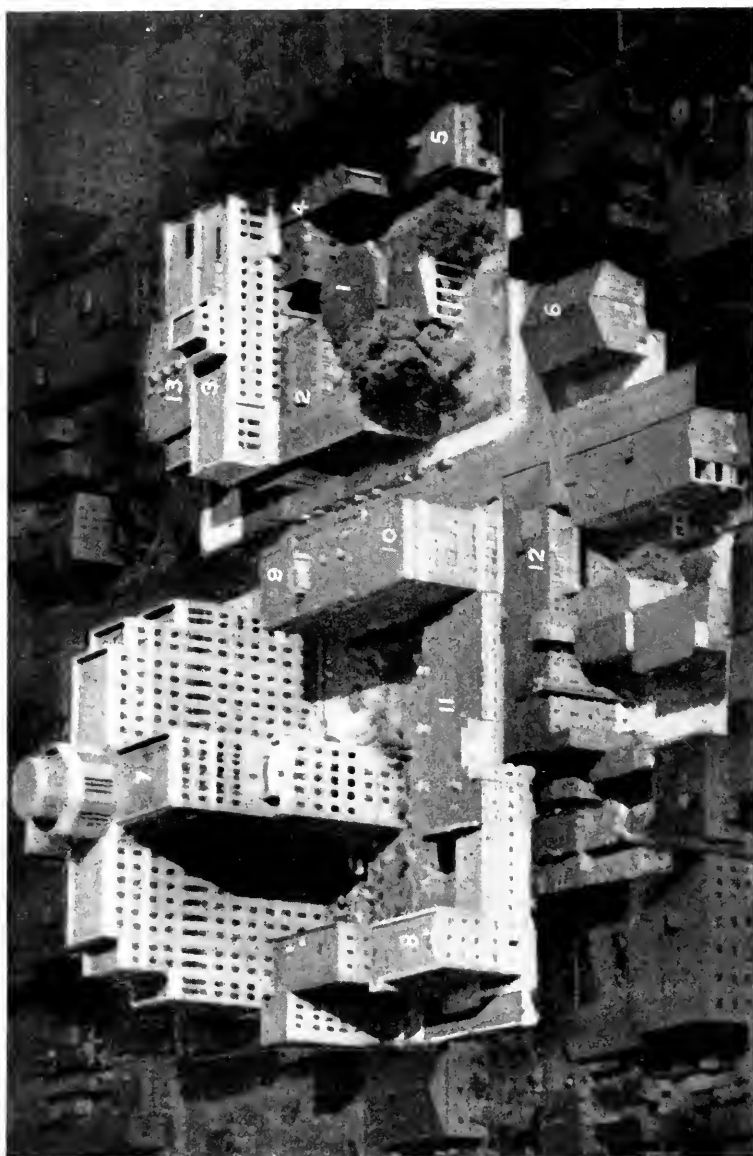
The centennial celebration of the University of Maryland was held May 30th and 31st, and June 1st and 2nd, 1907, with elaborate and appropriate exercises commemorating the occasion. A memorial volume was published, and a combined commencement of the various schools was held. Many distinguished visitors representing various academic fields and institutions attended the exercises. Dr. Cordell was instrumental in starting an endowment fund during the centennial. It is believed that the existence of this fund was responsible for other gifts such as that by Dr. Frank C. Bressler of funds which provided the research laboratory which bears his name.

The University of Maryland Base Hospital Unit Number 42 shortly after its organization in March 1918, for service in World War I, received orders to increase personnel and equipment to care for 1000 patients instead of the originally expected 500. A total of 350 persons was considered necessary for caring for the larger number of patients. Included were 34 physicians, 4 dentists, 100 nurses, and 200 enlisted men. It is interesting to note in the papers of the time an appeal was made for raising an emergency fund of \$10,000. Such a fund was to be used for numerous incidentals and comforts during the voyage and until the return home of all the persons involved. It seems that the government then provided only the bare necessities for each of these so-called Red Cross Base Hospital Units. Many of the physicians in the unit were faculty members of the medical school. That this unit served with distinction is attested by the high commendation it received from the Surgeon-General M. W. Ireland, U.S.A. The press observed that the University of Maryland, through Base Hospital Unit 42, maintained its splendid tradition of service during the greatest of emergencies. Many of the physician-graduates of the university served with honor and many gave their lives in the service of the country during World War I.

An act of the legislature in 1920 actually created the University of Maryland as it is known today. This act joined the Maryland Agricultural College, at College Park, with the schools of medicine, nursing, dentistry, pharmacy, and law. Provision was made in this act for coeducation. By the act the Board of Trustees of Maryland Agricultural College became the governing body of the university under the designation of the Board of Regents.

Attempts were made to secure funds for a new hospital as early as 1923 and 1924. These were unsuccessful and seemed to engender antagonism in high places. A bill was introduced which would provide certain funds for the hospital if the Baltimore schools would withdraw from the university. This bill was defeated. It was not until 1932 that the legislature appropriated \$1,120,000 for a new hospital building which was two stories less than originally planned. It opened in November 1934, but it was not until 1937 that the legislature granted the university \$140,000 out of the new state loan to add the two stories for which funds were not available in 1932-34. At the same time, and from the same loan, \$50,000 was provided to erect an addition to the nurses' home. In 1940 the eleventh floor was completed; and in 1947 the twelfth floor was added and has been used continuously as house-staff quarters.

The first major addition to the medical school buildings for some years came in 1939 with the erection, through the bequest of the late Dr. Frank C. Bressler, of the Bressler Research Laboratory. A number of preclinical departments of the



BALTIMORE SCHOOLS—UNIVERSITY OF MARYLAND

- | | |
|--|-----------------------------------|
| 1. Original Medical Building | 8. Nurses' Home, Medicine |
| 2. Laboratory Building, Medicine | 9. School of Medicine |
| 3. Bressler Building, Medicine | 10. School of Dentistry |
| 4. Gray Laboratory, Student's Lounge, Medicine | 11. Dental Clinic |
| | 12. Out-Patient Clinics, Medicine |
| | 13. School of Law |
| 5. Administration Building, College of Education, Baltimore Division | |
| 6. Medical Library | |
| 7. University Hospital | |

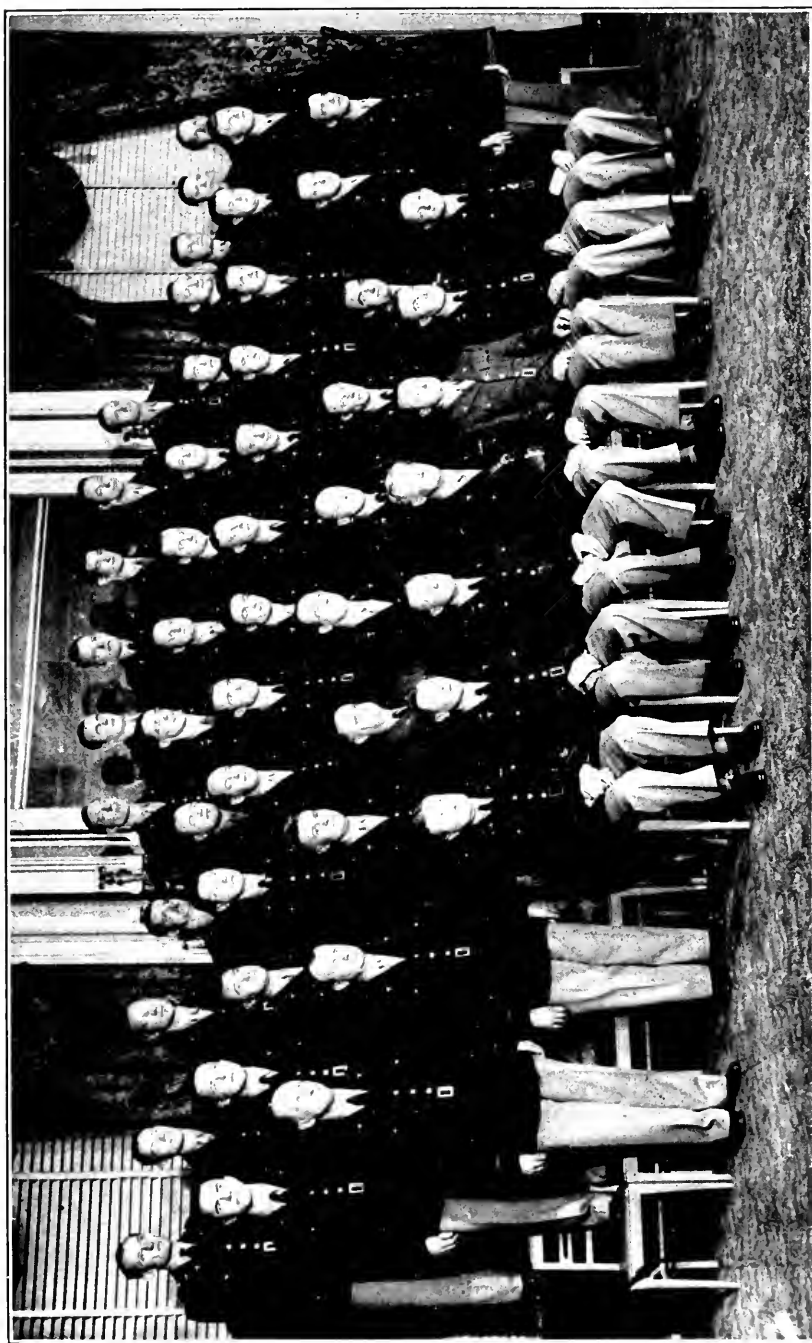


FIG. 8. OFFICER PERSONNEL OF 42nd AND 142nd GENERAL HOSPITALS

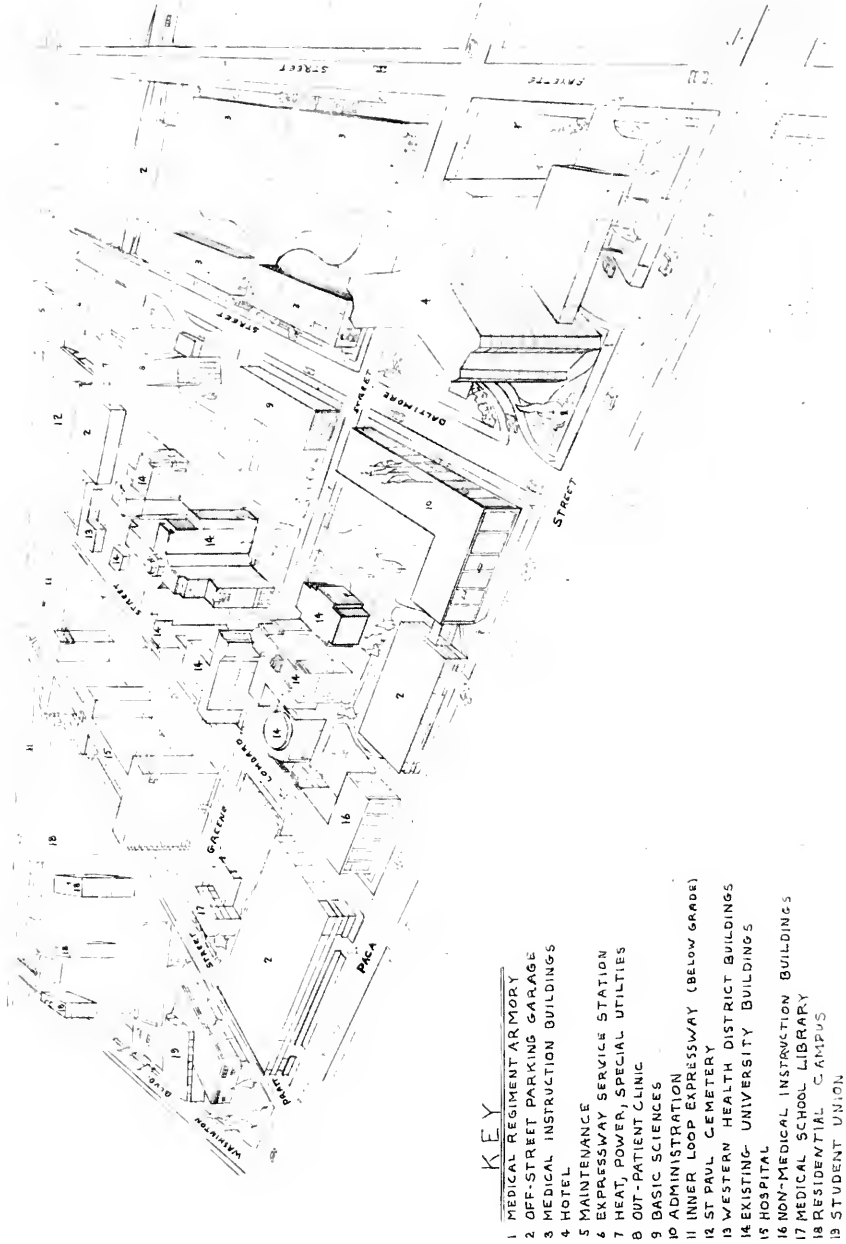


FIG. 9. FUTURE PLANS

school, together with their research activities, have occupied the major portion of the building.

With the advent of World War II, the medical school and hospital were seriously depleted of physicians and nurses. The faculty was reduced by approximately twenty-five per cent, and the large majority of nurses graduating during the war years entered the armed forces. Two 1000-bed general hospitals, the 42nd General Hospital and the 142nd General Hospital, were, for the most part, staffed by University of Maryland physicians and nurses. These units served with high distinction in the Southwest Pacific Area, in the Philippines, India, and Japan. At one time in 1943, of 360 students in the medical school, 333 were in the armed forces. Many medical alumni of the university served with distinction in the armed forces, and some lost their lives. Many individual and unit citations were received by university alumni.

The period from 1946 through 1953 was one of readjustment following the war; and of reorganization following the retirement and resignation of a number of department heads. The Psychiatric Institute and a junctional wing with the general hospital were added to the plant in 1952-53. The present bed capacity of the hospital is 692 and 70 bassinets. On July 1, 1954, Dr. William S. Stone, formerly commander of the Walter Reed Army Medical Center, became Director of Medical Education and Research. In July 1955, Dr. Stone became Dean of the School of Medicine. Approximately one-third of the major departments have had new professors appointed, and a new department of Preventive Medicine and Rehabilitation was created in 1954. Lack of space both in the medical school and hospital is one of the most pressing modern problems; for example, only about twenty per cent of the space in the Bressler Research Laboratory is actually being used for research, the remainder is occupied by basic science departments. To aid in the solution of this major problem, a plan to enlarge the Baltimore campus to more than four times its present size is under discussion. The first steps in this program have already been taken. The medical library is housed in temporary quarters while old Davidge Hall is being razed. On this site a modern health sciences library is to be erected. A new nurses' home is in the process of construction. Among other additions being discussed are an administration building and a new out-patient building to replace the present structure which is the historic edifice, the first unit of which, constructed in 1823, was the Baltimore Infirmary and later the University Hospital. Thus it would seem that the future will see the gradual replacement of all the buildings in which so much of the history of the medical school was made, with the exception of the grand old central "Pantheon".

DEPARTMENT
OF
OBSTETRICS & GYNECOLOGY

UNIVERSITY OF MARYLAND
SCHOOL OF MEDICINE

*Summary of Admissions
and
Perinatal Mortality*

July 1, 1955 through June 30, 1956

I. SUMMARY

	White Ward	Colored	Private	Total
1. Number of patients discharged	355	1811	1316	3482
2. Number of patients delivered and discharged (twins 39 sets, triplets 2 sets) . .	352	1571	1217	3140
A. Patients delivered of viable infants . .	351	1561	1159	3071
B. Patients aborting	1	10	58	69
3. Maternal Mortality	0	5	1	7
A. Rate per 1000 live births	0.00	3.20	0.43	1.68
4. Number of viable babies born	354	1584	1174	3112
A. Term	310	1287	1081	2678
B. Premature*	42	261	81	384
C. Immature†	2	36	12	50
5. Number born alive	343	1548	1047	2938
A. Term	303	1276	965	2544
B. Premature	39	245	76	360
C. Immature	1	27	6	34
6. Number stillborn	11	36	27	74
A. Term	7	11	16	34
B. Premature	3	16	5	24
C. Immature	1	9	6	16
7. Number of neonatal deaths	7	52	16	75
A. Term	4	6	3	13
B. Premature	2	22	8	32
C. Immature	1	24	5	30
8. Total perinatal mortality	18	88	43	149
A. Rate per 1000 live births	52.4	56.8	41.1	50.7
9. Rate deducting immature deliveries . . .	46.9	36.4	30.9	35.6

* A premature baby is one which weighs between 1001 grams and 2500 grams.

† An immature baby is one which weighs between 401 grams and 1000 grams.

II. TOTAL DELIVERIES BY NUMBER OF PRENATAL EXAMINATIONS

Number of Examinations	White Ward	Negro	Private	Total	Fetal Loss	
					No.	Per Cent
0	116	200	6	322	32	9.9
1-3	32	118	24	174	22	12.6
4-7	43	246	123	412	20	4.9
8 or more	106	859	890	1855	44	2.4
Elsewhere	22	16	9	47	2	4.3
Unknown	35	145	122	302	29	9.6
Total	354	1584	1174	3112	149	4.78

III. TOTAL DELIVERIES BY PRESENTATION

Presentation	White Ward	Negro	Private	Total	Fetal Loss	
					No.	Per Cent
Vertex	326	1504	1124	2954	105	3.6
Breech	24	67	46	137	42	30.7
Face	1	5	0	6	1	16.7
Brow	2	0	3	5	0	0.0
Compound	0	3	0	3	1	33.3
Transverse	0	5	1	6	0	0.0
Unknown	1	0	0	1	0	0.0
Total	354	1584	1174	3112	149	4.78
Twins and other multiple births	6	46	28	80	5	6.3

IV. TOTAL OPERATIONS FOR DELIVERY

A. Forceps and Cesarean Section and other Operations

	White Ward, No.	Negro, No.	Private, No.	Total		Fetal Loss	
				No.	% Del.	No.	%
Low forceps, elective	161	640	826	1627	52.2	15	0.5
Low forceps, indicated	13	67	43	123	3.9	6	4.9
Mid forceps, elective	4	27	28	59	1.9	6	10.2
Mid forceps, indicated	0	0	1	1	—	0	0.0
Total forceps	178	734	898	1810	58.0	27	1.5
Cesarean section	16	81*	33†	130	4.2	14	10.8
Breech, spontaneous	2	11	4	17		13	76.6
Breech, extraction	15	43	36	94		19	20.2
Breech, decomposition	0	0	1	1		0	0.0
Breech, forceps to aftercoming head	13	23	22	58	51.8	4	6.9
Total Breech	17	54	41	112	3.5	32	28.5
Craniotomy and other destructive operations	0	0	0	0	0	0	0.0
Version and extraction (single)	1	1	3	5	—	0	0.0
Version and extraction (multiple)	0	1	1	2	—	0	0.0
Spontaneous	142	712	197	1051	33.1	76	7.2

* 1 set twins.

† 1 set twins.

B. Episiotomy

	White Ward	Negro	Private	Total
Median.....	212	887	961	2060
3° laceration.....	5	47	10	62
Per cent.....	2.4	5.3	1.0	3.0
4° laceration.....	10	20	14	44
Per cent.....	4.7	2.3	1.5	2.1
Mediolateral.....	9	29	32	70
3° laceration.....	0	0	1	1
Per cent.....	0.0	0.0	3.1	1.4
4° laceration.....	0	0	0	0
Per cent.....	0.0	0.0	0.0	0.0
Total.....	221	916	993	2130

C. Other Operations

	White Ward, No.	Negro, No.	Private, No.	Total		Fetal Loss	
				No.	% Del.	No.	%
Hysterostomy.....	1	1	0	2	—	0	0.0
External version.....	0	2	4	6	0.2	1	16.7
Induction of labor by rupture of membranes.....	0	3	12	15	0.5	2	13.3
Pitocin induction.....	2	11	40	53	1.7	6	11.3
Induction of labor, other.....	1	8	10	19	0.6	0	0.0
Pitocin stimulation.....	1	15	53	69	2.2	2	2.9
Manual removal of placenta.....	16	31	37	84	2.7	—	—
Repair of cervical laceration.....	7	34	18	59	1.9	—	—
Repair of vaginal laceration.....	5	50	21	76	2.4	—	—
Prolapse of cord.....	4	11	2	17	0.6	7	41.2
Willet forceps.....	0	2	1	3	—	2	66.7
Single transfusion.....	11	71	22	104	3.3	—	—
Multiple transfusion.....	9	45	10	64	2.1	—	—
Shoulder dystocia.....	2	6	3	11	0.4	5	45.5

D. Total Number of Deliveries with Previous Cesarean Section

	White Ward, No.	Negro, No.	Private, No.	Total		Fetal Loss	
				No.	% Del.	No.	%
Vaginal delivery.....	4	17	3	24	29.6	1	4.2
Repeat cesarean section.....	11	30	16	57	70.4	4	7.0
Total.....	15	47	19	81	2.6	5	6.2

V. TOTAL NUMBER OF LIVE BIRTHS ACCORDING TO WEIGHT AND CONDITION AT DISCHARGE

Birth Weight, Grams	White Ward			Negro			Private			Total		
	Total live births	Died	% Deaths	Total live births	Died	% Deaths	Total live births	Died	% Deaths	Total live births	Died	% Deaths
401-1000.....	1	1	100.0	27	24	88.9	6	5	83.3	34	30	88.2
1001-1500.....	6	2	33.3	36	15	41.7	6	2	33.3	48	19	39.6
1501-2000.....	10	0	0.0	62	5	8.1	18	5	27.8	90	10	11.1
2000-2500.....	24	0	0.0	151	2	1.3	58	1	1.7	233	3	1.3
2501 & over.....	302	4	1.3	1272	6	0.5	1059	3	0.3	2633	13	0.5
Total.....	343	7	2.0	1548	52	3.4	1147	16	1.3	3038	75	2.5

VI. TOTAL NUMBER OF STILLBIRTHS ACCORDING TO WEIGHT

Birth Weight, Grams	White Ward			Negro			Private			Total		
	Total births	Still- births	% Still- births	Total births	Still- births	% Still- births	Total births	Still- births	% Still- births	Total births	Still- births	% Still- births
401-1000.....	2	1	50.0	36	9	25.0	12	6	50.0	50	16	32.0
1001-1500.....	6	0	0.0	41	5	12.2	7	1	14.3	54	6	11.1
1501-2000.....	13	3	23.1	69	7	10.1	21	3	14.3	103	13	12.6
2001-2500.....	25	1	4.0	155	4	2.6	59	1	1.7	239	6	2.5
2501 & over.....	308	6	1.9	1283	11	0.9	1075	16	1.5	2666	33	1.2
Total.....	354	11	3.1	1584	36	2.3	1174	27	2.3	3112	74	2.4

VII. TOTAL NUMBER OF STILLBIRTHS AND NEONATAL DEATHS ACCORDING TO WEIGHT

Weight, Grams	White Ward			Negro			Private			Total		
	Total births	Stillbirths & neonatal deaths	%	Total births	Stillbirths & neonatal deaths	%	Total births	Stillbirths & neonatal deaths	%	Total births	Stillbirths & neonatal deaths	%
401-1000.....	2	2	100.0	36	33	91.7	12	11	91.7	50	46	92.0
1001-1500.....	6	2	33.3	41	20	48.8	7	3	42.9	54	25	46.3
1501-2000.....	13	3	23.1	69	12	17.4	21	8	38.0	103	23	22.3
2001-2500.....	25	1	4.0	155	6	3.9	59	2	3.4	239	9	3.8
2501 & over.....	308	10	3.2	1283	17	1.3	1075	19	1.8	2666	46	1.7
Total.....	354	18	5.0	1584	88	5.6	1174	43	3.7	3112	149	4.7

VIII. ETIOLOGY OF PERINATAL MORTALITY

	Premature			Full Term			Total
	W.W.	Negro	Private	W.W.	Negro	Private	
Hemorrhage, intracranial.....	0	4	3	2	4	2	15
Precipitate labor.....	0	3	1	1	3	1	9
Breech.....	0	1	2	1	1	1	6
Anoxia.....	5	39	8	1	9	4	66
Placenta—premature separation of.....	2	26	6	0	2	2	38
Placenta previa.....	0	1	1	1	1	0	4
Toxemia.....	3	8	1	0	6	1	19
Cord—umbilical compression of.....	0	4	0	0	0	1	5
Complications—medical.....	0	0	0	0	0	0	0
Shoulder dystocia.....	0	0	0	0	0	0	0
Development—anomalies of.....	0	2	0	1	0	1	4
Infections.....	0	1	0	0	0	0	1
Immaturity.....	1	12	6	0	0	0	19
Atelectasis.....	0	2	3	1	0	0	6
Erythroblastosis.....	0	0	1	1	0	5	7
Undetermined.....	2	11	3	4	4	7	31

IX. CAUSES OF PREMATURITY AND IMMATURITY

	White Ward	Negro	Private	Total	Fetal Loss	
					No.	Per Cent
Toxemia.....	4	36	7	47	6	12.8
Hemorrhage.....	7	49	13	69	38	55.1
Premature rupture of membranes.....	8	75	18	101	11	10.9
Multiple pregnancy.....	4	28	6	38	12	31.6
Maternal diseases.....	1	0	0	1	0	0.0
Cervical pathology.....	1	3	1	5	1	20.0
Fetal abnormalities.....	1	9	3	13	0	0.0
Fetal death in utero.....	0	11	5	16	16	100.0
Undetermined.....	18	86	40	144	19	13.2
Total.....	44	297	93	434	103	23.7

X. COMPLICATIONS

A. Total Number of Deliveries with Toxemia

	White Ward		Negro		Private		Total		Fetal Loss	
	No.	% Del.	No.	% Del.	No.	% Del.	No.	% Del.	No.	%
Acute toxemia.....	18	5.1	142	9.0	31	2.6	191	6.1	8	4.2
Pre-eclampsia.....	18	5.1	140	9.0	31	2.6	189	6.1	8	4.2
Eclampsia.....	0	0.0	2	—	0	0.0	2	—	0	0.0
Chronic hyper-tension.....	30	8.5	215	13.6	53	4.5	298	9.6	24	8.1
With toxemia.....	6	1.7	37	2.3	12	0.9	55	1.8	9	16.4
Without toxemia.....	24	6.8	178	11.3	41	3.6	243	7.8	15	6.2
Total.....	48	13.6	357	22.6	84	7.1	489	15.7	32	6.5

B. Total Number of Deliveries—Rh Negative

	White Ward		Negro		Private		Total		Fetal Loss	
	No.	% Del.	No.	% Del.	No.	% Del.	No.	% Del.	No.	%
Rh Neg., sensitized..	6	1.7	12	0.8	27	2.3	45	1.4	10	22.2
Rh Neg., not sensitized..	51	14.4	102	6.4	157	13.4	310	10.0	6	1.9
Other isoimmunization.....	0	—	1	—	0	—	1	—	0	0.0
Total.....	57	16.1	115	7.2	184	15.7	356	11.4	16	4.5

C. Total Number of Deliveries with Medical Complications

	White Ward, No.	Negro, No.	Private, No.	Total		Fetal Loss	
				No.	% Del.	No.	%
Heart disease.....	8	31	12	51	1.6	5	9.8
No failure.....	5	30	11	46	1.5	4	8.7
Failure.....	3	1	1	5	0.1	1	20.0
Tuberculosis.....	2	17	13	32	1.0	1	3.1
Pulmonary, active.....	0	2	1	3	—	0	0.0
Pulmonary, inactive.....	2	10	10	22	—	0	0.0
Elsewhere.....	0	5	2	7	—	1	14.3
Diabetes.....	0	8	4	12	0.4	2	16.7
Sickle cell anemia.....	0	9	0	9	0.3	0	0.0
Syphilis.....	1	41	6	48	1.5	0	0.0

D. Prolonged Labor

	White Ward	Negro	Private	Total	Fetal Loss	
					No.	Per Cent
Pitocin stimulation.....	0	6	1	7	0	0.0
Spontaneous delivery.....	1	5	1	7	0	0.0
Elective forceps.....	1	17	3	21	1	4.8
Indicated forceps.....	1	9	0	10	1	10.0
Cesarean section.....	0	12	0	12	0	0.0
Breech.....	0	1	1	2	0	0.0
Total.....	3	50	6	59	2	3.4

E. Total Number of Deliveries by Pelvis

Type of Pelvis	Cases			By Roentgen-ray			Fetal Loss (Cases)		Fetal Loss (Roentgen-ray)	
	W.W.	Negro	Private	W.W.	Negro	Private	No.	%	No.	%
Normal.....	270	1276	916	26	95	54	112	4.5	6	3.4
Contracted inlet.....	4	45	14	2	28	3	4	6.4	2	6.1
Midplane contraction.....	8	62	25	5	37	5	3	3.2	2	4.3
Outlet contraction.....	3	20	73	0	2	10	0	0.0	0	0.0
Inlet and outlet.....	0	1	1	0	0	0	0	0.0	0	0.0
Inlet and midplane.....	0	25	64	0	16	7	0	0.0	0	0.0
Midplane and outlet.....	2	26	0	1	14	0	2	6.9	0	0.0
Inlet, midplane and outlet.....	2	7	0	0	3	0	0	0.0	0	0.0
Asymmetrical.....	0	1	0	0	1	0	1	100.0	1	100.0
Unknown.....	65	121	81	0	0	14	27	10.1	0	0.0
Total.....	354	1584	1174	34	196	93	149	4.8	11	2.5

F. Total Number of Deliveries with Hemorrhage

	White Ward	Negro	Private	Total		Fetal Loss	
				No.	% Del.	No.	%
Antepartum Hemorrhage							
Placenta previa.....	4	9	4	17	0.5	4	23.5
Abruptio placenta.....	9	51	19	79	2.5	34	43.0
Marginal sinus.....	1	6	2	9	0.3	1	11.1
Ruptured uterus.....	0	0	2	2	—	0	0.0
Other causes.....	12	34	13	59	1.9	6	10.2
Total.....	26	100	40	166	5.3	45	27.1

Postpartum Hemorrhage*

Total postpartum hemorrhage.....	13	62	30	105	3.4	—	—
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* Postpartum hemorrhage is defined as blood loss of 500 cc. or more.

G. Total Number of Deliveries According to Puerperal Morbidity

Puerperal Morbidity	White Ward		Negro		Private		Total	
	No.	% Del.	No.	% Del.	No.	% Del.	No.	% Del.
One day fever.....	3	0.8	41	2.6	37	3.2	81	2.6
Puerperal infection.....	14	4.0	80	5.1	16	1.4	110	3.5
Other causes.....	10	2.8	111	7.0	24	2.0	145	4.7
Total.....	27	7.6	232	14.7	77	6.6	336	10.8

XI. CESAREAN SECTIONS

Type of Operation	White Ward	Negro	Private	Total	Fetal Loss	
					No.	%
Low cervical	11	59	25	95	8	8.4
Classical.....	1	4	4	9	3	33.3
Classical with tubal steriliza- tion.....	3	11	1	15	3	20.0
Low cervical with tubal sterili- zation.....	1	5	2	8	0	0.0
Classical and hysterectomy.....	0	2	1	3	0	0.0
Extraperitoneal.....	0	0	0	0	0	0.0
Total.....	16	81	33	130	14	10.8

Indications for Cesarean Section

	White Ward	Negro	Private	Total	Fetal Loss	
					No.	%
1. Pelvic contractions and mechanical dystocia.....	4	51	11	66	3	4.5
A. Contracted pelvis.....	4	38	7	49	3	6.1
B. Uterine inertia.....	0	8	2	10	0	0.0
C. Malpresentation.....	0	2	1	3	0	0.0
D. Large fetus—normal pelvis.....	0	0	1	1	0	0.0
E. Failed forceps.....	0	3	0	3	0	0.0
2. Previous cesarean section.....	6	10	11	27	2	7.4
3. Hemorrhagic complications.....	3	10	5	18	7	38.9
A. Abruptio placentae.....	0	3	2	5	3	60.0
B. Placenta previa.....	3	7	2	12	4	25.0
C. Ruptured uterus.....	0	0	1	1	0	0.0
4. Toxemia.....	0	4	0	4	1	25.0
5. Diabetes.....	0	2	4	6	0	0.0
6. Miscellaneous.....	3	4	2	9	1	11.1
A. Elderly primigravida.....	0	0	0	0	0	0.0
B. Prolapse of cord.....	2	2	0	4	0	0.0
C. Bad obstetric history.....	0	0	0	0	0	0.0
D. Other.....	1	2	2	5	1	20.0

XII. THERAPEUTIC ABORTIONS

White Ward	Negro	Private	Total
0	0	0	0

XIII. STERILIZATIONS

Type of Operation	White Ward	Negro	Private	Total
A. Tubal, puerperium.....	2	5	7	14
B. Tubal, not pregnant.....	0	0	0	0
C. Accompanying cesarean sect.—tubal ligation....	4	16	4	24
D. Accompanying therapeutic abortion—hysterotomy and tubal ligation.....	0	0	0	0
E. Accompanying cesarean sect.—hysterectomy....	0	0	0	0
F. Hysterectomy, not pregnant.....	0	2	0	2
Total.....	6	23	11	40

Indications for Sterilization

	White Ward	Negro	Private	Total
Diabetes.....	0	0	0	0
Previous section.....	4	16	4	24
Hypertensive disease.....	0	0	1	1
Multiparity.....	2	5	4	11
Heart disease.....	0	0	0	0
Other.....	0	2	2	4
Total.....	6	23	11	40

XIV. MATERNAL DEATHS

Total live births.....	2938
Total maternal deaths.....	6
Total maternal death rate.....	2.04 per 1000 live births
Registered births.....	2790
Maternal deaths in registered patients.....	4
Maternal death rate in registered patients.....	1.43 per 1000 births
Non-registered births.....	322
Maternal death in non-registered patients.....	2
Maternal death rate in non-registered patients.....	6.21 per 1000 births

M. R., U. H., 019-5-11, a 21 year old colored female, para 1-0-0-1, was admitted 12/19/55 because of pleuritic pain. She had had a D & C for incomplete abortion in September 1955. No regular menses since then but intermittent spotting. A roentgenograph of the chest showed a circumscribed lesion in the left upper chest, thought to be tuberculous in origin. The patient was treated medically until pleural biopsy revealed an hematothorax on 1/15/56. On 1/28/56, a gynecologic consultant suggested laparotomy for chorioepithelioma since bilateral ovarian masses could be detected. On 1/31/56, a total hysterectomy, bilateral salpingo-oophorectomy was done. A microscopic examination did not reveal chorioepithelioma. On 2/12/56, the patient died suddenly in acute respiratory distress. Autopsy:—Chorioepithelioma, left lung.

Z. P., U. H., 024-2-73, a 23 year old registered, colored female, para 1-0-0-1, was admitted in early active labor 3/21/56 at 6:15 P. M. At 7:00 P. M. the membranes ruptured spontaneously. At 7:10 P. M. she was given 200 mgm. of seconal orally and at 7:35 P. M., 50 mgm. of demerol and 0.2 mgm. of scopolamine intravenously. At the same time, full dilatation of the cervix was

obtained. At 7:37 P. M., nitrous oxide and oxygen by mask was started, the ratio being 4:1. At 7:41 P. M., the patient was delivered of a full term living male child and the anesthetic agent was discontinued, and patient appeared to awaken soon thereafter. At 8:30 P. M. she could not be aroused. An examination revealed no pulse, blood pressure, or respirations. Attempts at revival were to no avail. Autopsy:—Aspiration of food particles in the bronchi. Cause of death:—Anesthesia.

H. W., U. H., 067-7-75, a 40 year old registered, colored female, para 5-0-0-5, was admitted 3/24/56, after an uneventful prenatal course, in early labor. After spontaneous rupture of the membranes, which contained large quantities of meconium, at 7:20 P. M. she progressed precipitously and delivered spontaneously a premature living female child. At 7:45 P. M., when the head was delivered, approximately 300 cc. of bright red blood escaped from the vagina. After delivery of the infant, another 700 cc. of blood followed. The uterus was immediately explored and a rupture found in the anterior lower uterine segment. Blood drawn during late labor for cross-matching, did not clot. Laparotomy:—rupture of the uterus, large hematoma in left broad ligament. She received 5 grams of fibrinogen 3500 cc. of blood, but bleeding was not controlled nor could a clot be made to form. The patient expired 2 hours after delivery. Blood samples contained no detectable fibrinogen. Cause of death:—Spontaneous rupture of the uterus; afibrinogenemia.

L. F., U. H., 080-7-30, a 38 year old white, registered female, para 1-0-3-0, admitted 9/29/55 in false labor, 3 weeks past term. The following evening she went into active labor and after 2 hrs. the fetal heart rate dropped to 80/minute. The administration of oxygen was successful and at 12:40 A. M. she was fully dilated. At 12:48 A. M. she was given saddle block anesthesia with 2.5 mgm. of nupercaine. Her blood pressure on admission was 130/80 and, after anesthesia, was between 120/80 and 130/90. She was delivered of a full term stillborn child at 1:15 A. M. with the use of low forceps. The 3rd. stage was normal with a blood loss of 175 cc. Postpartum blood pressure was 120/80. At 1:45 A. M. the patient appeared mildly cyanotic. Her blood pressure was 90/72, respirations were 30 per minute. At this time, the patient complained of sharp epigastric pain. A medical consultant saw the patient at 2:00 A. M.; she was treated with oxygen, fluids and shock position. A general physical examination was essentially negative except for aspects of cardiovascular collapse. The lung fields at all times remained clear. At 2:20 A. M. her blood pressure was 100/70, pulse 120, respirations 36/minute. It was the impression of the medical consultant that the patient had a coronary occlusion. She died at 2:50 A. M. Cause of death:—Shock, undetermined, (possible coronary occlusion). No autopsy.

L. H., U. H., 024-6-87, a 37 year old colored, registered female, para 4-0-2-4, was admitted 11/10/55 because of projectile vomiting and disorientation in the 34th week of her pregnancy. After preliminary studies, a diagnosis of brain tumor was made and a craniotomy was performed on 11/11/55 with excision of the tumor mass. The following day at 12:14 P. M., the patient expired. At 12:18 P. M., a premature living male child was delivered, which survived. Autopsy:—Tuberculoma, basal ganglia, left and frontal lobe, left; leptomeningitis, tuberculous.

V. W., U. H., 068-0-07, a 36 year old, unregistered colored female, para 3-2-0-4, was admitted 12/29/55 in active labor. She delivered the same day, after 7 hours of labor, a full term living female child without difficulty. Her blood pressure was normal during her entire hospital stay. Immediate puerperium was normal, and she was discharged 1/1/56 in good condition. She was readmitted to the medical service 1/10/56, after having been found unconscious at home just prior to admission. Her blood pressure was 180/90 and, after physical examination and lumbar puncture, the diagnosis of subarachnoid hemorrhage was made. Later, revision of diagnosis was, hemorrhage into the left cortical and subcortical area with rupture into the subarachnoid space and probably into the cerebral hemisphere. She expired 1/12/56. Autopsy:—Thrombosis, superior sagittal sinus; intracerebral and subarachnoid hemorrhage, secondary.

OBSTETRIC CASE REPORT*

C. H., a 25 year old, white, Para 1001, was admitted to the University Hospital at 3:15 a.m. because of the onset of labor contractions. Her family and past history are noncontributory. Her first pregnancy terminated after a normal antenatal course with a delivery of a full term infant, a vertex, weighing 3246 grams. With this pregnancy, the patient's antenatal course was uneventful with a weight gain of 18 lbs. Antenatal pelvimetry revealed a diagonal conjugate that was not reached at 12½ cms.; a slightly narrow pubic arch, an intertuberous diameter of 8 cms. and a posterior sagittal diameter of 8 cms.

On admission the diagnosis of breech presentation was made with the presenting part floating. Fetal heart rate was 144 beats per minute on the left side of the abdomen and the estimated size of the infant was 3600 grams. The cervix was 6 cms. dilated, 100 per cent effaced and the membranes were intact. The membranes were rather closely applied to the frank breech.

Roentgen pelvimetry was obtained as soon as the diagnosis was made of a breech presentation. The following were the pertinent measurements:

Obstetric conjugate—11.4 cms.

Transverse diameter of the inlet—9.8 cms.

Interspinous diameter—8.8 cms.

Anteroposterior of the outlet—11.3 cms.

This revealed a contracted anthropoid pelvis with rather marked transverse narrowing. On arrival back from the Department of Radiology, the patient was fully dilated with the presenting part still floating. An immediate cesarean section of the low cervical variety was done with a delivery of a full term living female child, weighing 4082 grams, at 4:48 a.m. on the day of admission. The patient had an uneventful postpartum course and the baby was discharged with the mother in good condition.

DISCUSSION

The patient's first pregnancy terminated without difficulty and, indeed, none was expected. No difficulty was expected at this time and it is suspected that if the breech presentation had not been present, the problem would not have been solved as quickly as it was. One hears the term, "tried pelvis", all too commonly. It is too generally believed that if a woman can deliver a baby one or more times successfully, she will be able to continue doing so ad infinitum in the future. This is a misconception. Disproportion can occur in subsequent pregnancies particularly when the infants are larger.

The roentgen pelvimetry was not obtained because of the floating presenting part but because of the breech presentation. We have found it expedient to obtain roentgen visualization of the pelvis in all breech presentations regardless of parity. This policy proved to be sound. A marked transverse contraction was found which without

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doubt would have seriously handicapped the delivery of a 4000 gram infant. It was felt that a live and uninjured infant could not be delivered through this pelvis vaginally. The use of the roentgen pelvimetry on all breeches is recommended unless it has been obtained in previous pregnancies.

The patient also emphasizes that there has been a marked change in the general type of pelvic contraction among humans as is evidenced by the fact that at the turn of the last century, the common abnormality in pelvic contraction resulted from rickets producing a flat pelvis. In these patients, the diagonal conjugate usually could be reached with ease. Because of better diets, the ricketic pelvis has almost disappeared. In its place, the transversely contracted pelvis has become dominant in causing dystocia. In this type of pelvis the diagonal conjugate cannot usually be reached. Most of them cannot be recognized by physical examination but only by the use of roentgen rays. In all patients in whom dystocia may be a problem, roentgenology is invaluable as an aid in diagnosis and therapy.

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EDITORIAL

MAURICE C. PINCOFFS

With the good wishes of his friends, the members of faculty and his former students, Maurice C. Pincoffs has retired as Professor of Medicine and Professor of Preventive Medicine. His success as a physician, teacher, preceptor and as a medical statesman has been great and has been recognized through the many honors he has received from the nation; from organized medicine; from his many students and from the University in which he chose to make his career. Although he remains active and strong of mind, his formal professional and academic career came to a close on May 31st when a testimonial dinner was held in his honor. This was attended by many of the great men of medicine, former students, associates and those with whom he has served in the organization of the social aspects of medicine and in the planning of medical facilities for the nation and the State of Maryland.

Aside from his prowess as a physician, Dr. Pincoffs offered his colleagues a determination of thought, a penetrating attitude and an analytical sense which bespoke not only an active and integrative mind but a clear understanding of the many hidden facts of a complex problem. The crystallization of the essence of a complex order was his ultimate delight. Through this type of medical statesmanship he rose to great fame. The number of committees on which he sat, and often as Chairman, are perhaps not known even to himself. His services to the school and to his community are indicated in the institutions which are a product of his influence and clear thought.

As a physician by the bedside he also ranks paramount among his associates. The meticulous thoroughness, the intense inquiry into the more remote aspects of disease served him well. As an astute diagnostician and clinician his equal will be hard to find.

A forceful teacher and an exemplary preceptor, investigator and medical editor, his professional life as directed to the practice of internal medicine has indeed been a rich one filled with many lasting achievements.

The influence of Maurice C. Pincoffs will remain in the School of Medicine. It has been too good, too healthy and too productive to die with the retirement of this one man. Although retired, he will remain as a consultant to the School of Medicine.

His influence has already spread to the younger men who are succeeding him in various capacities and who are proud to carry on the tradition he so carefully established during the many years of his tenure.

In commenting on the early professional career of Dr. Maurice C. Pincoffs, Dr. Alan M. Chesney, one of the principal speakers at the Testimonial Dinner mentioned briefly some of the predictions of his early preceptors in Chicago, stating that he had a very fine mind, a forceful personality and would make an excellent physician, recommending that the faculty of the Johns Hopkins School of Medicine accept him to advance standing. Maurice C. Pincoffs has repaid the confidence of his own professors in full. He thus climaxes a distinguished career with the knowledge that his life has been successful and that he has stepped down from his professional duties knowing full well that American medicine is better for his having been an active part of it.

J. W.

MEDICOLEGAL ASPECTS OF INFECTION

RUSSELL S. FISHER, M.D.*

The medical significance of infection as a complication of injury and as a primary process has concerned the physician since the earliest records of medicine. Now, during the last few decades, with the great growth of compensation legislation and medicolegal litigation, infection has assumed such forensic importance that it deserves special consideration because of its medicolegal aspects. The various ramifications are best considered in five categories:

I. In industrial accident cases where infection complicates the accidental injury and leads to additional disability and hence cost.

Little need be said here other than to stress the doctor's legal duty to exercise meticulous care in medical treatment with the use of antibiotics and surgical debridement where indicated.

II. In occupational diseases where epidemiologic investigation following the establishment of a diagnosis is of medicolegal importance in establishing the compensability of the disease.

Through the years an increasing number of infectious agents have been added to the list accepted as causing compensable disease. Anthrax, glanders, occupational tularemia, brucellosis, psittacosis, leptospirosis and Rocky Mountain Spotted fever are well known among this group. The present law in Maryland no longer lists the diseases specifically but states "where an employee . . . suffers from an occupational disease . . . or dies as the result of such disease and the disease was due to the nature of the occupation or process in which he was employed . . . the employee or . . . his dependents shall be entitled to compensation . . . as if such disablement or death were an injury or accident." (1) This law obviously means that the Industrial Accident Commission will be guided by expert advice from the medical profession as to which diseases are caused by infectious agents and under what conditions they fall under the intent of this legislation.

III. In accidental injuries not covered under the usual scope of the state and federal compensation laws where the question may be raised as to whether the plaintiff's own negligence was a contributory factor in causing the infection and hence the disability.

In compensation cases, the statutes usually provide compensation "without regard to negligence" but in other accidents such is not the case and the proof that the plaintiff's own negligence contributed to his bad result may be a significant factor in the defense against a suit for damages. In general it can be stated that this situation is not regarded legally as "contributory negligence" but rather as "avoidable consequence". To quote from one decision in this matter (2) "The rule of avoidable consequences is to be distinguished from contributory negligence in that contributory negligence is a bar to the action while the rule of avoidable consequences merely goes to the reduction of the damages caused by the defendant." An

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example from Prosser (3) further clarifies the situation—"Thus, where the plaintiff is injured in an automobile collision, his contributory negligent driving before the collision will prevent any recovery at all but his failure to support proper medical care for his broken leg will bar only his damages for the subsequent aggravated condition of the leg." It will be up to the physician attending the case to supply the expert opinion as to whether the patient's complicating infection resulted from his negligence and further to aid the jury in evaluating how much of the final bad result was caused by the original injury and how much to the complicating infection as a result of the plaintiff's own negligence.

IV. In criminal cases, where an infection may be a significant factor in the fatal result or in aggravation of the injuries inflicted by the defendant's assault.

Here the degree of guilt of the assailant may be lessened if it can be demonstrated that the infection was intercurrent rather than a "natural consequence of the injury". Contrarywise, even though the deceased may have been negligent in his own care and thus contributed to the fatal result, the legal principle states—

"If one unlawfully inflicts upon the person of another a wound calculated to endanger or destroy life, it would not be a defense to a charge of unlawful homicide, where death ensues, to show that the wounded person might have recovered if the wound had been more skillfully treated. Even unskillful or negligent treatment of the wound on the part of the wounded person or his physicians, which may have aggravated the wound and contributed to the death, does not relieve the assailant from liability. He must show that the negligent and unskillful treatment was the sole cause of death, before he can escape the consequence of his unlawful act on this ground. (4)

V. In malpractice cases where the occurrence of infection either primarily or complicating injuries, may be the cause for tort action on a negligence basis against the medical practitioner.

It is a principle of law that the mere failure of the physician to perform a certain act is not sufficient to justify an award in a malpractice suit. It must also be demonstrated that injury (infection) with harm to the patient resulted directly from such failure of the physician.

Several of the more important variations in this field include:

1. *Failure to use known remedies commonly used by physicians.* It has been established that the treatment of dirty or penetrating wounds should include tetanus antitoxin administered prophylactically unless one can be sure that effective toxoid prophylaxis has been obtained when a toxoid "booster" may be all that is indicated. Failure to render such treatment, if followed by tetanus, will establish a "prima facie" case of negligence which the court is apt to put to a jury for decision unless unusual extenuating circumstances are demonstrated. One such example is in the Pennsylvania case of *Hodgson v. Bigelow* (5), where the physician treated a wound of the thigh described as five inches deep but entirely subcutaneous without administering tetanus antitoxin. The patient, an 8 year old boy, developed tetanus on the 8th day and, though he survived, required extensive and expensive hospitalization and treatment of his wound and the tetanus. At trial, the judge found in favor of the doctor in the negligence suit and did not allow the jury to bring in a verdict

but the Appellate Court granted a new trial and the Superior Court affirmed this order. Pertinent excerpts revealing the thinking of the courts are "the facts on record amply support an inference that had the patient been treated with anti-tetanus serum when the defendant first attended him, the onset of lockjaw would have been averted." "No claim is made . . . that failure to administer antitetanic serum was due to any hypersensitivity on the part of the patient." "The primary issue of fact was the *nature of the wound*. If it was a punctured wound (as its size, 5 inches in depth with a diameter of $\frac{1}{2}$ " indicates it was) all the professional witnesses on both sides testified in effect that the treatment administered by the defendant was *not* proper."

One of the situations where an indication to withhold prophylactic antitoxin may occur is where there may be sensitivity of the patient to horse serum. It is in these types of cases that finest judgment must be exercised since it is now confirmed medical opinion that the serum should be used in cases in which it is clearly indicated but it should not be given routinely, i.e., the bad result from serum sickness or anaphylaxis might be held culpable if medical testimony indicated the risk of tetanus did not justify taking the risk of serum reaction.

In this regard, too, Regan cites an interesting case where a mother whose 6 year old child suffered a penetrating wound of his foot, refused the administration of T.A.T. (6). The physician, not accepting the oral refusal as final, followed up with a letter by registered mail noting her refusal to allow the treatment and reiterating his recommendation. The child died of tetanus 10 days later and some months later, the physician received a letter from an attorney acting for the boy's parents threatening legal action against him "because of failure to care for the child in a manner consistent with the standard of practice in the community in that you did not give tetanus antitoxin to the child." When the physician produced the carbon copy of his letter to the mother with her signed "return receipt" the attorney dropped the matter with an apology to the physician. The moral to be drawn is obvious although frequently disregarded by busy practitioners today. The legal background of the lawyer's prompt withdrawal is of course based on a long established principle that the physician or dentist cannot be held liable for injuries consequent upon unskillful or negligent treatment if the patient's own negligence directly contributed to them to an extent which cannot be distinguished or separated. The converse of this holds true, however, and if the patient's contributory negligence and its bad effects can be separated from the physician's negligent harm, the plaintiff may recover "for such injury as he may show thus proceeded solely from the want of ordinary skill or care of the defendant (physician)." (7)

In a suit against a dentist for osteomyelitis of the mandible, following a tooth extraction, where a fragment was left in, the facts developed that the dentist instructed the patient to return on the day following the original extraction for "further examination and treatment." This she failed to do but presented herself four days later at which time infection had developed to a serious degree. She was referred to an expert who extracted the broken root but, nonetheless, osteomyelitis requiring further surgery and leaving serious deformity followed. The testimony established that it was proper practice to postpone until the next day the root

extraction because of pregnancy and nervousness of the patient and that she failed to return the next day as directed. The Court stated (8) "If she had done so, for anything that appears, her trouble might have been completely alleviated and no further evil consequences might have happened to her." "It is the duty of the patient to cooperate with his professional adviser—but if he will not, or under the pressure of pain cannot, his neglect is his own wrong or misfortune for which he has no right to hold his surgeon responsible. (*McCandless v. McWha* 22 Pa. 261, 268)".

In the same way, there are legal decisions establishing negligence on the part of the physician where ophthalmia neonatorum developed and it could be shown that the physician failed to exercise prophylactic steps as provided for by law or by general practice in his community. These decisions mostly date back to the days when silver nitrate installation in the newborn's eyes was routine or required by law. Modern drugs have displaced argyrol but there seems no reason to doubt the precedent cases along this line would be applicable today if ophthalmia neonatorum is allowed to develop and prophylactic treatment has not been used. For example, in *Walden v. Jones* (9), the language of the court may be quoted—"Certainly the evidence that the defendant failed to place a prophylactic in the eyes of the newborn child is sufficient to conclusively establish negligence on the part of the physician in the light of the uncontradicted medical testimony that in all localities physicians ordinarily use silver nitrate or *some other prophylactic* in the eyes of a child at birth and that reasonable care and diligence require such to be done."

2. *Failure to exercise due skill and care in blood transfusion* with the transmission of infection by the transfusion of blood from donors whose histories or whose blood or serologic study indicates they are not acceptable donors. Serum hepatitis is transmitted by blood transfusion and it may be assumed that the recipient who develops hepatitis will have cause for action against the physician(s) responsible for transfusing them with blood of donors whose history reveals hepatitis or even bona fide exposure to the disease within several months prior to the blood donation. (10) In the same way, malaria, measles and possibly syphilis may be transmitted via blood transfusion and it is incumbent on the blood bank operator to rule out active disease of this list in his donors by taking adequate history and serologic study. The genesis of septicemia or related conditions by the transfusion of bacterially contaminated blood is a further variant of the same since it is commonly, though by no means correctly, (11) assumed that due care in operation of a blood bank will prevent such accidents.

3. *The causation of infection by the use of unsterile instruments.* In *Lanier v. Trammell* (12), the basis for malpractice action was the loss of vision of an eye because of an infection wherein the patient alleged the eye specialist failed to sterilize instruments and to wash his hands before performing an operation. The surgeon lost, and an award of \$5000 was made. It is of interest that one of the defendant's arguments on appeal was that "even if it be conceded that appellant failed to sterilize his instruments and to wash his hands, this is not sufficient upon which to base a finding that such negligence was the proximate cause of the infection which caused the injury to the appellee's eye." The court said "It is not required in a case of this

kind, that the injured party show to a mathematical certainty or to the exclusion of every hypothesis, that his injury occurred as a result of the negligence of which he complains" . . . and quoting Herzog . . . "but a showing of strong probability of the casual relation is sufficient . . . where negligence and injury are proved, the casual connection between them may be established by circumstantial evidence, by inference from physical facts."

The same conclusions with an award of \$8000, were reached in a suit against a dentist for infection following use of a non-sterile needle and no antiseptic at the site of injection in the case of *Braham v. Veding* (13) and against another physician who packed a post abortal uterus without exercising good surgical technique with subsequent fatal streptococcal septicemia. (14) In the latter case, the award was \$4000. Several other more recent instances where infection followed poor surgical or nursing technique are recorded.

4. *Spread of disease by patients* as when patients spread an infectious disease under circumstances where the physician failed to use reasonable skill or care to prevent such occurrence. This may arise because:

a. The doctor *does not recognize* the disease as contagious and hence does not warn the patient. The Ohio Supreme court considered, in 1928, a case of black smallpox when the attending physician failed to recognize its dangerous nature and reassured a neighbor, on direct questioning, that the disease was not contagious and presented no risk to the neighbor if he visited the sick. The neighbor attended the ill man until his death from smallpox and performed certain services with respect to preparation of the body for burial after death. The neighbor contracted smallpox and died. His widow sued the attending physician. The court specifically pointed out that it was the doctor's duty to know of the danger of contagion of smallpox and warn the neighbor of this fact and further that it was his duty to so acquaint himself with the signs and symptoms of the disease that he would not miss the diagnosis. He failed in this latter duty and the verdict for the widow was affirmed.

b. *The doctor recognizes danger of contagion but fails to inform* the patient or his family of the danger, i.e. he fails in his *duty to inform* and the patient in ignorance spreads the disease by failing to exercise proper precautions. A child was taken to the hospital for treatment of a fever which soon became accompanied by a rash and was diagnosed as scarlet fever. The physician did not report the case to public health authorities nor did he advise the parents of the contagious nature of the disease. He allowed them to visit the child in the hospital and to take her home before *the infectious* period was past. Both parents contracted scarlet fever. They subsequently sued the physician and won. The court stated: "Generally speaking, one is responsible for the direct consequences of his negligent acts whenever he is placed in such a position with regard to another that it is obvious that, if he does not use due care in his own conduct, he will cause injury to that person." (15).

c. The doctor *recognizes* the disease as infectious or contagious but *advises the patient incorrectly* regarding its danger or the precautions to be taken. (16) A physician was treating a patient for an infected wound. He advised the patient's wife to dress the wound and she inquired if there was danger to her. She was reassured that it would be safe to do as the doctor directed. She did and contracted an extensive

skin infection herself. The court found the sequence of events to indicate negligence on the doctor's part in that he improperly advised her she would be safe in dressing her husband's wound.

SUMMARY

The occurrence of infection in wounds of traumatic and surgical nature and the role of infectious agents in the spread of disease raise many medicolegal problems. A few of these, in the fields of criminal acts, civil litigation, including malpractice action, and compensable injuries and diseases, have been presented in an effort to bring the physician to the awareness of this medicolegal aspect of his everyday practice.

REFERENCES

1. Annotated Code of Maryland, 1951 Edition; Article 101, Sec. 21.
2. Sacony Vacuum Oil Co., Inc. v. Marvin, 21 NW (2d), 841 @ 847.
3. Handbook Law of Torts, Prosser, Wm.; West Publishing Co. St. Paul, (1955) p. 287.
4. State v. Karsunky; 84 Pac. (2d) 396.
5. Hodgson v. Bigelow; 7 At. (2d) 338.
6. Doctor and Patient and the Law; Regan, Louis J.; C. V. Mosby, St. Louis, 1956, p. 601.
7. Hibbard v. Thompson, 109 Mass. 286.
8. Gentile v. De Virgilis; 138 Atl., 540.
9. Walden v. Jones; 158 SW (2d) 609.
10. The Physician and the Law; Long, Rowland, H.; Appleton-Century-Crofts, Inc. New York, 1955, p. 153.
11. Medicolegal aspects of blood transfusion; A.M.A. Committee on Medicolegal Problems, J.A.M.A. **151**, 1435.
12. Lanier v. Trammell; 180 SW (2d) 818.
13. Barham v. Weding; 291 Pac. 273, 277.
14. Hafernan v. Seymer; 219 NW 375.
15. Skillings v. Allen; 173 NW 663.
16. Edwards v. Lamb; 45 Atl. 480.

A NOTE ON DETERMINATION OF TRANSAMINASE ACTIVITY IN BLOODY CEREBROSPINAL FLUID*

MOTOJI MIYAZAKI, M.D.

Determination of cerebrospinal fluid glutamic oxalacetic transaminase (GOT) has been found useful in indicating acute central nervous system damage. It has been reported that serum GOT activity is significantly elevated in hemolyzed serum as compared to non-hemolyzed serum (1). Therefore, it seemed desirable to determine the effect of an admixture of red blood cells (RBC's) on the transaminase activity of cerebrospinal fluid (CSF), since spinal fluid is frequently blood tinged or bloody. Also, xanthochromia often exists in CSF in which a knowledge of the transaminase activity may be clinically useful.

Samples of CSF with normal levels of GOT activity were obtained and mixed with fresh blood in varying concentrations. Samples from four control patients were so mixed that concentrations of RBC's per cu. mm. of 87,000, 39,000, 27,000, 15,000, and 10,000 were obtained for each patient. These mixtures were incubated at body temperature and serial determinations of transaminase activity for each concentration were made. Each specimen was centrifuged prior to the determination. The level of GOT activity was obtained spectrophotometrically by the method of Karmen et al. (2).

Complete hemolysis was noted within 48 hours. In all specimens the transaminase activity was increased, reaching a peak in from 9 to 48 hours. Over the next 60 hours the GOT returned to near the original level. Those samples with the lower RBC concentrations revealed a peak prior to complete hemolysis, while those with the greater number of RBC's showed the GOT peak at the time of complete hemolysis. In all the samples the GOT levels were within the normal range based on a control series.

It is concluded, therefore, that whole blood in CSF will increase the GOT activity. This increase will be greatest at about the time of complete hemolysis when the greatest amount of the enzyme is released from the red cells. This occurs about 48 hours after the bleeding and will have returned to insignificant levels by 100 hours after bleeding. The effect of blood pigment, oxyhemoglobin and bilirubin upon the spectrophotometer readings can be eliminated by the use of a normal sample of the CSF for comparison when making determinations on such fluid. In addition, the nature of the method used for this study, which is a measurement of the rate of a chemical reaction, would tend to reduce the significance of such a complicating factor. Grossly bloody spinal fluid should be centrifuged promptly and the supernatant removed if more accurate transaminase levels are to be obtained. In the presence of subarachnoid bleeding the most accurate determinations will be made on CSF samples taken at least 4 days after the bleeding has occurred.

REFERENCES

1. LADUE, J. S., AND WROBLEWSKI, F.: The Significance of the serum glutamic oxalacetic transaminase activity following acute myocardial infarction. *Circulation*: **6**: 871 (June) 1955.
2. KARMEN, A., WROBLEWSKI, F., AND LADUE, J. S.: Transaminase activity in human blood. *J. Clin. Invest.* **34**: 126-133, 1955.

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OUR DISTINGUISHED HONORARY ALUMNUS—EPHRAIM McDOWELL

JOHN C. KRANTZ, JR.

The year 1807, in which the University of Maryland was founded, marked the birthdays of two great Americans, Henry Wadsworth Longfellow and Robert E. Lee. Two years later, on February 12, 1809, both Abraham Lincoln and Charles Darwin saw the light of day for the first time. Later, Lincoln was to champion the cause of the bodies of mankind and Darwin was destined to sever the fetters of the mind.



Ephraim McDowell

It was in this year, on Christmas eve, that Jane Crawford looked into the courageous face of Ephraim McDowell and exclaimed, "I am ready, I have faith in your judgment and skill." These words have echoed down to us through the corridors of an ever-lengthening past—they are the epitome of the doctor-patient relationship.

This valiant patient had traveled alone on horseback sixty miles over a mountain trail. She was seriously ill and burdened with a twenty-two and a half-pound ovarian

cyst. C. V. Mosby, in relating this ride by Jane Crawford, described it as fraught with more courage than the celebrated ride of Paul Revere, Sheridan's ride from Winchester, or the Charge of the Light Brigade in the Crimea. She had bade her family farewell, her path led through a virgin wilderness inhabited by unfriendly Indians. At the end of the trail she faced the uncertainty of a surgical procedure untried and considered beyond the pale of possible success. Dauntless she rode on prepared to die, prepared to live if McDowell succeeded. Without anesthesia, without the anti-infective drugs, Dr. McDowell's success as the pioneer ovariologist is a matter of medical record. It was a milestone in abdominal surgery. Jane Crawford, who was forty-eight years old in 1809, lived to see her seventy-eighth birthday.

Ephraim McDowell was born during the early rumblings of the American Revolution on November 11, 1771, in Rockbridge County, Virginia. His ancestry was



The house in Danville, Kentucky, where the first ovariectomy was performed by Ephraim McDowell

strongly Scotch-Irish. After the Revolutionary War, Samuel McDowell, Ephraim's father, and his family migrated to the frontier town of Danville, Kentucky. It was in Danville, a village of about 150 inhabitants, that Ephraim spent his adolescent years. Young McDowell came under the influence of many distinguished friends of his father who stood high in the political life of the new community. He decided to study surgery. He was apprenticed to Dr. Alexander Humphreys of Staunton, Virginia. Humphreys had studied in Edinburgh and after a few years of tutelage, young McDowell decided to follow the example of his teacher and study surgery in that venerable institution. Here McDowell came under the influence of the distinguished surgeon, John Bell. He made an indelible impression upon this student, which impression was to inaugurate a new era of surgery. Like William Beaumont, Ephraim McDowell did not graduate from a college of medicine. He returned to Danville

and at the age of thirty he enjoyed a wide medical and surgical practice. Besides, he had become a man of means and prominence in the community.

The news of the successful ovarian operation could not be contained by the mountains of Kentucky. He sent the report of his operation to his old teacher, John Bell. He performed two additional ovariectomies. The contagion spread and other surgeons performed this operation. But in 1822 it was Ephraim McDowell who was called to Hermitage, Tennessee, to remove an ovarian tumor from the wife of John Overton, the wealthy banker friend of Andrew Jackson.

The fame of this courageous surgeon came to the attention of the faculty of the newly-established University of Maryland. In 1824 the faculty conferred the degree of Doctor of Laws upon the Marquis de LaFayette who was making a return visit to America. One year later the faculty conferred the degree of Doctor of Medicine upon Ephraim McDowell. It was the only degree he ever received. The Rt. Rev. James Kemp, D.D., was Provost of the University, and John B. Davidge, M.D., was Dean of the faculty. Elisha Debutts, who assisted Lyman Spalding in the compilation of the first United States Pharmacopeia, was Professor of Chemistry.

It was fitting and proper for these early founders of our University to so honor Ephraim McDowell. While many other medical schools and associations in America and abroad were debating the wisdom of McDowell's courageous adventure in surgery, the faculty of this school had the vision to perceive its significance and accordingly honored this pioneer.

Through the decades, as an unending procession of teachers of the Medical School have walked to the lectern in old Chemical Hall, and the old floor boards have responded with their characteristic creaking sound, it has been an inspiration to recall that this is hallowed ground, for once here stood the father of abdominal surgery, a "backwoods Galahad," Ephraim McDowell.

OBSTETRIC CASE REPORT*

The patient was a 26 year old registered colored, STS negative, RH positive, para 6-0-0-6 who was admitted to the hospital on 10-26-56 in questionable early labor, with a history of passing about a cupful of dark red blood just prior to admission. The past obstetric history revealed a spontaneous delivery of a live born 10 lb 15 oz infant in 1953 and a pregnancy in 1954 characterized by hypertensive cardiovascular disease and by a postpartum hemorrhage due to uterine atony. The present prenatal course had these particular facets.

1. Marked obesity and excessive weight gain.
2. Borderline hypertension.
3. Single footling breech presentation.
4. Absence of fetal heart since 8-1-56.
5. Estimated date of confinement was 9-30-56, so the patient was three weeks "past due date" on admission.

When admitted, necrotic membrane was protruding from the vagina and one foot of the breech was presenting. Contractions which had started at 10:30 a.m. the morning of admission, were poor and cervical dilatation was slow but progressive. At 7:40 a.m., the cervix was 7-8 cm dilated, a foot was protruding from the vagina to mid-calf, intravenous fluids were being administered, bleeding and clotting time were normal. At this time a sterile tape was attached to the foot of the infant, run over a pulley at the end of the bed and a weight of one half pound was attached to its distal end. For the next twelve hours, there was no significant progress in cervical dilatation. Serial clotting times over this period were normal and the patient was given morphine sulphate, grains 1/4, at 3 a.m. At 9 a.m. the patient was put up sterile and examined. At this time, she was found to be fully dilated.

MANAGEMENT OF DELIVERY

Blood was brought to the delivery room to be held in readiness, general anesthesia with ether and cyclopropane was started and carried to the deep surgical level. Under the relaxation obtained, the second foot was delivered and the trunk was delivered to the level of the upper abdomen using combined traction and "vis-a-tergo". Further progress was impossible at this point. Using scissors, the abdomen was incised and the abdominal contents removed. Following this, the diaphragm was incised and the thorax was eviscerated. Following evacuation of these body cavity contents, there was advance under traction to about mid-thorax of the infant. Once again there was impasse. At this point, the trunk was then severed from the thorax, and the upper portion was pushed upwards into the uterus, the arms were then brought down splinted alongside the thorax and using traction on the arms, the remaining thorax, shoulder girdle and head were delivered intact. The placenta was removed manually. The uterus was found to be intact on examination and no lacerations were present. An intrauterine culture was taken. The estimated maternal blood loss was 250 cc. Oxytocics were given immediately following delivery of the placenta, and

* From the case histories, University Hospital, Baltimore.

the postpartum course of this patient was essentially benign. She was discharged home on the seventh postpartum day. The aggregate weight of the component parts of the fetus weighed 5,188 grams or 11 lb. 7 oz.

COMMENT

This case is interesting from several points of view. First of all, the history of having a baby of excessive weight by previous pregnancy should have directed the attention of those who saw this patient in the prenatal clinic to the possibility that this individual was either prediabetic or a diabetic. Subsequent glucose tolerance tests after this last delivery indicate that this individual is most likely a diabetic. Restriction of weight gain would probably have been of marked benefit in this particular case. The admitting doctor's attention to the possibility of clotting deficiency in this particular case was not too well founded. No cases of clotting deficiency have been recorded in intrauterine death of fetus up to 60 days. While it is realized that this patient had had no recorded fetal heart for 85 days, she was RH positive and by far the overwhelming majority of clotting deficiencies develop after retention of an infant, dead because of RH incompatibility. A single clotting time on admission was indicated but it is doubtful whether the serial clotting times during labor were necessary. During the 12 hours of relative inertia, it is felt that more effort should have been expended in getting this woman delivered. The use of a tape and traction on a known dead fetus is a recognized therapeutic procedure. By this manner one attempts to get closer apposition of the presenting part to the cervix and so stimulate stronger and more effective uterine contractions. When one half pound was not sufficient to produce this coaptation of the presenting part, increasing weights of one half pound could have been added up to a total of two to two and one half pounds and this would have probably expedited delivery of the infant. A point to notice particularly is the deep surgical anesthesia that was used for manipulation of this macerated fetus. It is essential that such manipulation be carried out under almost complete relaxation. The principle in delivery in such a case is reduction of fetal diameters so that delivery may be effected without injury to maternal parts. One should never risk laceration to the maternal uterus or maternal birth passage in an attempt to deliver an already dead fetus. Following delivery of the macerated portions of the fetus, an intrauterine examination was mandatory in order to detect possible lacerations. Fortunately these did not occur. This patient must be given close follow-up in the clinic in order that attempts be made to prove her strongly suspected diabetes and a therapy may be instituted so that such an obstetric catastrophe will not recur.

BOOK REVIEW

An Atlas of Anatomy. *J. C. Boileau Grant, Professor of Anatomy in the University of Toronto, 4th edition, Baltimore: The Williams & Wilkins Co. 634 plates, 1956. Price \$15.00.*

This atlas was well received in its first three editions and is now so widely known that a detailed description here scarcely appears necessary. The illustrations of dissections depict a progressive display of the various regions and would be useful in the majority of dissecting room programs. Both line drawings and half-tone illustrations are skillfully executed to delineate clearly important structures and their mutual relationships. The accompanying text material makes no attempt at exhaustive description, but consists of terse statements which emphasize the salient features and important interrelationships to be observed in each plate. The atlas will serve the student well and delight the surgeon more than ever through the inclusion of numerous plates of great practical value in connection with surgical procedures (ex.: in the neck, abdomen, thorax, pelvis, inguinal region). Many of the more common anatomic variations are shown and their frequencies noted.

In this new edition, Grant's Atlas has become even more comprehensive and useful. Author and publisher, by a skillful shifting and regrouping of numerous illustrations and the judicious deletion of a few others, have contrived to introduce more than 80 new illustrations without adding any perceptible bulk to the book. A decimal system of numbering the plates has been adapted so that in future editions all plates may retain their present numbers regardless of the number and location of new plates which may be added. Colors have been intensified in some illustrations and added in others. Especially noteworthy are the new plates of cross-sections of the neck, root of the neck, stellate ganglion, coronal sections of the orbital and nasal cavities, female perineum, dissections of the hilar of the lungs from various aspects, and a number of excellent photographs of the skull to illustrate the face, teeth, oral and nasal cavities and para-nasal structures. Doctor Grant is to be complimented upon this splendid new edition.

Vernon E. Krah, Ph.D.



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EDITORIAL

TOWARD THE THIRD CENTURY

On the 18th day of December, 1807, the Legislature of the State of Maryland created a medical college in the City or precincts of Baltimore for the instruction of students in the various branches of medicine.

In the Act it was explicitly stated that the college "... be established in the City or precincts of Baltimore upon the following fundamental principles. to wit; The said college shall be founded and maintained forever upon a most liberal plan, for the benefit of students of every country and every religious denomination, who shall be freely admitted to equal privileges and advantages of education, and to all the honors of the college, according to their merit, without requiring or enforcing any religious or civil test, or urging their attendance upon any particular plan of religious worship or service; nor shall any preference be given in the choice of a president, professor, lecturer or other officer of the said college, on account of his particular religious profession; but regard shall be solely paid his moral character and other necessary qualifications to fill the place for which he shall be chosen."

For a century and a half these principles have remained the basis for the continued development of the School of Medicine. The achievements of the past and the current academic role of the School of Medicine speaks well for the care and thought given the original charter and for the validity and usefulness of the principles displayed in the preamble of the founding act.

On December 18, 1957, in commemoration of the passage of the Act creating the School of Medicine, the faculty, distinguished guests and educators will gather in Chemical Hall. A ceremony of re-dedication will be held to the high principles of religious and educational freedom, scholarship and investigation which have been the enviable past of the School of Medicine. To this end the faculty will turn its attention in the years which lie ahead.

This ceremony of re-dedication not only formalizes the end of the Sesquicentennial Year but opens a challenge to the younger men of the faculty, that they be reminded of the illustrious past which has been theirs to receive and in the half century which lies ahead that they give due attention to the responsibilities which they have assumed. May the Bicentennial of the School of Medicine in 2007 reflect the same warm satisfaction which the celebrants of the Sesquicentennial have enjoyed with respect to the contributions of their predecessors.

(SPECIAL ARTICLE)

THE ROLE OF SURGERY IN THE MANAGEMENT OF CORONARY
ARTERIAL INSUFFICIENCY*

DAVID C. SABISTON, JR., M.D.† AND ALFRED BLALOCK, M.D.

The problem presented by patients with coronary arterial insufficiency is one of the most difficult that is encountered in clinical medicine. The victims of this disorder who survive the acute attack fall into two broad groups: (1) those who have sustained one or more proved attacks of myocardial infarction with residual cardiac damage and who have an increased risk of subsequent coronary occlusion, and (2) those who suffer from intermittent or continual cardiac pain (angina pectoris) with or without proved myocardial infarction. Many of the patients in both groups may be treated by the use of coronary arterial vaso-dilators, anticoagulants, diet, hormones, and alterations in environmental stress. Despite these helpful adjuvants there remains a group of patients who continue to have pain that cannot be controlled by medication. Furthermore patients with previous myocardial infarction are in need of greater protection against subsequent attacks.

Coronary insufficiency is most often the result of coronary atherosclerosis. While the pathogenesis of atherosclerosis is incompletely understood it is recognized that it is a disease which may begin early in life and is characterized by a progression of the pathologic process. With development of lesions in the coronary arteries, obstruction to coronary blood flow results. Acute coronary arterial obstruction is poorly tolerated primarily because of the fact that coronary arteries are largely "end arteries" and have few inter-coronary collateral communications. Such an acute occlusion may result in an ischemic area of myocardium which acts as a focus of conductive irritability and immediate ventricular fibrillation may take place. When the occlusion develops more slowly, inter-coronary collateral channels have at least some opportunity to develop and to offer some protection. It is in this latter group of patients in whom chronic anginal pain is more likely to occur. In this situation collaterals are present to allow the myocardium to remain viable but any increased demand of the heart for oxygen cannot be met. Additional arterial flow to the cardiac muscle can be induced by (1) increased development of inter-coronary collateral vessels and (2) new growth of vessels into the myocardium from an extra-cardiac source.

Extensive experimental studies by a large number of investigators have shown that protection against induced coronary arterial occlusion may be offered the heart of an animal. This protection results from any one of a number of surgical procedures on the heart and pericardium and in fact may result from pericardiotomy alone. Presently available data suggest that the chief benefit derived from the various experimental operations is the result of an increase in the number of inter-coronary collateral vessels rather than the ingrowth of new vessels into the heart.

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The first surgical procedure for human coronary insufficiency was performed by Jonnesco of Bucharest in 1916 and consisted of a cervico-thoracic sympathectomy. Beck later reported the use of the pectoralis major muscle as a graft to the surface of the heart, and this was the beginning of a series of studies which he and his associates have continued. These contributions have added much to our understanding of myocardial revascularization. Numerous procedures have been advocated and include, cardiac denervation, epicardial abrasion, partial coronary sinus ligation, aortic-coronary sinus anastomosis, cardio-omentopexy, cardio-pneumopexy, implantation of an artery into the myocardium, and ligation of the internal mammary artery. The striking feature common to most of these technics is that each seems to result in benefit. Further, there does not appear to be any great difference in the degree of improvement resulting from the various methods. This had led most of those interested in this field to employ one of the simplest procedures, such as the Beck I operation, in order to assure low mortality and morbidity rates.

At the present time it seems advisable to recommend operation for those patients with angina pectoris whose discomfort cannot be satisfactorily managed with medication. In this group the results are gratifying and the majority of patients experience definite improvement in their symptoms and exercise tolerance. Some are completely relieved of their discomfort and others are moderately improved. The choice of operative procedure is a matter of individual opinion. Our present preference is for a simple procedure which is rapid and which is associated with little risk. It consists of a thoracotomy and dissection of a pedicle of mediastinal fat together with its vessels. A large area of the anterior pericardium is excised and the epicardium is destroyed by the application of concentrated phenol. Asbestos or talc is then applied to the surface of the ventricles and the mediastinal fat pedicle is sutured to the myocardium. This operation requires an hour or less and the mortality rate is low.

It is apparent that the operations available are not the ultimate solution to the problem of coronary insufficiency. Further studies in the experimental laboratory are needed. Technics for the direct removal of the occluding atheroma are being investigated. There is good reason to believe that progress in this direction will be made and that a more direct surgical attack will become feasible.

DEOCIN: A NEW ANTIBACTERIAL ANTIPERSPIRANT*

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BALTIMORE, MARYLAND

Shelley and Cahn (1), in 1955, demonstrated that neomycin, in a concentration of 0.5 per cent, in lotion or ointment base, was effective in reducing the usual axillary bacterial flora which are frequently responsible for obnoxious body odors. Hexachlorophene and tertiary ammonium compounds, other antiseptics with low indices of adverse reactions, serve a similar purpose. Economic availability of these two chemical substances accounts for their widespread use.

Deodorants may be classified into three general groups: Those which mechanically inhibit or impede the activity of the axillary apocrine sweat glands; those which have anti-bacterial or antiseptic qualities; and those which mask odors. Some commercial preparations combine these properties. Any deodorant is potentially capable of producing allergic contact dermatitis. This eruption is popularly known as "deodorant dermatitis."

Deodorants which act as antiperspirants usually contain an aluminum compound as the active ingredient. The most commonly used compound of this group is the aluminum chlorhydroxide complex. Although no statistics are available, it is the consensus of opinion of dermatologists polled by the authors that these aluminum compounds are responsible for the production of most cases of axillary "deodorant dermatitis."

Deodorants which depend solely on odor-masking qualities are almost obsolete. An ideal deodorant-antiseptic should control bacterial fermentation products and should impede axillary perspiration without disturbing physiologic functions. This presents a problem which, in the light of our present knowledge, is insoluble. In view of this, the product should impede perspiration, control bacterial fermentation products and cause a minimum number of adverse reactions. It should be esthetically acceptable to the user and should be easy to apply.

A preparation, Deocin[®], containing 0.5 per cent neomycin sulfate, 20 per cent aluminum chlorhydroxide complex, 0.2 per cent methylparaben and 0.3 per cent n-butyl-p-hydroxybenzoate was submitted to the authors for study. It is the purpose of this paper to evaluate Deocin as a deodorant-antiperspirant mixture.

THE STUDY

Methods and Materials: The preparation is manufactured in simple lotion form which is applied with the finger tip or applicator from a plastic squeeze bottle, and in a "bomb" form dispenser which uses dichloro-difluoro-methane and dichloro-tetrafluoro-ethane as propellants. The lotion, which is in a greaseless base, is a faintly perfumed white liquid. When applied sparingly to the skin it does not leave a residue. When the stopper of the pressure spray dispenser is depressed, the mixture emerges

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* Deocin was supplied by the Upjohn Company.

TABLE I
Effects of Repeated Applications of Deocin (Antibacterial Antiperspirant) on 262 Patients

	Frequency of Application	Number of Patients	Reactions		Effectiveness
			Derma- titis	Absces- ses	
Lotion in squeeze bottle	Daily	65	2	1	Effective
	Twice weekly	22	1	None	Effective
Lotion in pressure spray bottle	Daily	87	2	None	Effective
	Every other day	40	None	None	Effective
	Twice weekly	38	None	None	Effective
	Once weekly	10	None	None	Moderately effective

from the tip as a fine mist. If this is applied in one second bursts at a distance of eight to ten inches, no visible residue remains on the skin.

Patient Selection: A total of 262 patients used this deodorant-antiperspirant preparation. Patients included in this study were drawn from the Medical School of the University of Maryland, the Nursing School of the University of Maryland, the out-patient departments of the University of Maryland and the Women's Hospital and the private practices of the authors. Eighty-seven patients used the lotion supplied in plastic squeeze bottles and 175 patients used the lotion supplied in pressure bottles.

Method of Application: Patients were instructed to apply the lotion from the squeeze bottles with the finger tips or an applicator once daily to each axilla.

Those patients who used the aerosol bottle dispensers were instructed to hold the tip 6 to 10 inches from the axillae and apply a single one or two second burst of the mist to each axilla. The patients included in this group applied the mist daily or at two, three, or seven-day intervals. Observations of this group of patients are summarized in Table I.

Summary of Observations: Five patients who used this preparation developed contact dermatitis in the axillae. Four of these had been previously affected by other deodorants containing the aluminum chlorhydroxide complex. The fifth patient noticed an erythematous eruption after using Deocin daily for one month. Applications were discontinued by this patient and the eruption subsided after one week of local steroid therapy.

One patient who had been under treatment for hydradenitis suppurativa (axillary abscesses) used the lotion but when new abscesses developed applications were discontinued.

All patients stated that the deodorant-antiperspirant preparation was as effective as any commercial product previously used, and fifty-three people preferred it.

On the basis of these observations, groups of patients were asked to apply Deocin at two-day intervals, twice weekly, or weekly. Seventy-eight patients who applied Deocin only two or three times weekly claimed that more frequent applications were unnecessary. When used once weekly, three of ten patients were satisfied with results.

DISCUSSION

Of the six patients who suffered adverse reactions to repeated applications of Deocin, five had been previously irritated by other deodorants containing the aluminum chlorhydroxide complex.

The patient with axillary abscesses was given Deocin, to use because of the neomycin content. When abscesses continued to develop, applications were discontinued.

The previous study by Shelley and Cahn (1) obviated the necessity for cultural studies and control studies.

SUMMARY AND CONCLUSIONS

Deocin, a new antibacterial-antiperspirant, has been used by 262 patients. All users of this preparation stated that it was as effective as any deodorant-antiperspirant previously used and fifty-three stated it was superior to any product previously used.

The addition of neomycin to the lotion adds antibacterial action to the antiperspirant activity.

Individuals who used both the squeeze bottle and "bomb" type applicator, preferred the latter.

It is the opinion of the authors, based on previous experience and statements of the patients in this study, that Deocin, an antibacterial-antiperspirant, is superior to most of the presently available deodorant preparations.

This study indicates that Deocin is an effective deodorant-antiperspirant mixture with a low incidence of adverse reactions.

BIBLIOGRAPHY

1. SHELLEY, W. B. AND CAHN, M. N.: Effect of Topically Applied Antibiotic Agents on Axillary Odor. *J. A. M. A.* **159**: 1736-1738, Dec. 31, 1955.

CATATONIC PATIENTS TREATED WITH INTRAVENTRICULAR CHOLINESTERASE*

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In 1950 one of us (S. L. S.) attempted to interrupt catatonic stupor by injecting certain synaptic depressant drugs into the cerebral ventricles of three patients. The drugs used were: freeze-dried human erythrocytes with Cholinesterase activity of Q Ach 250; Procaine; Pentamethonium Iodide and Flaxedil. In the first case all four drugs were used; in the second case Cholinesterase, Pentamethonium Iodide and Flaxedil; and in the third case Pentamethonium Iodide and Flaxedil were used. The Cholinesterase preparation proved the most active in one case—a young woman who had been in continuous catatonic stupor for six years except for eight weeks after a lobotomy ten months before injection, was aroused and remained in a considerably improved state for over three months after two injections. Of the other drugs, Pentamethonium (C_5) was more efficacious than Flaxedil and Procaine; C_5 was not as good nor as long lasting as the freeze-dried human erythrocytes in the first case. Procaine had the least effect; in doses sufficient to cause vomiting it produced no therapeutic results. For further details of the clinical course of these patients and for the theoretic considerations which led up to these studies the reader is referred to the original communication (3).

Following the above clinical trial there ensued a period of laboratory research which demonstrated the feasibility of employing studies of carbohydrate metabolism and electroencephalography as well as clinical observation as means of evaluating the efficacy of such methods of treatment (5). Such laboratory methods of assaying the effect of intraventricular medication in catatonic patients were particularly desirable since clinical improvement—spontaneous or otherwise, transient or longer lasting—is not unheard of in this condition. In the present study we have attempted to confirm the original clinical observations on a further series of patients and to study the effect of intraventricular Cholinesterase on the blood sugar tolerance to insulin and on the electrical activity of the brain.

METHODS AND MATERIAL

Four long-standing, insulin-resistant, mute, waxy, incontinent catatonics were selected from the custodial wards of the Manteno State Hospital. Bilateral frontal burr holes were made and the wounds allowed to heal. Insulin tolerance tests and electroencephalograms were done on each patient prior to operation, following operation but prior to intraventricular medication, and at intervals during the period of observation after treatment had begun. Insulin tolerance tests were done according to

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* Read at the meeting of the Society of Biological Psychiatry, Atlantic City, New Jersey, May, 1952.

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the method of Braceland, Meduna and Vaichulis (1). Electroencephalographic studies were carried out on an eight channel Grass Electroencephalograph Model IIIB. We received from Dr. David Nachmansohn Acetyl Cholinesterase prepared by him in as pure a form as possible from the electric organ of the eel. The concentrated material was diluted in saline and injected with barbotage into the cerebral ventricles of three of these patients while the patient lay immobile without anesthetic or other disturbing medication. Immediately after each injection the patient's head was rotated in an attempt to facilitate distribution of the drug and he was placed in a sitting position. Of the three patients one received a total of four injections and the other two patients a single injection. The amounts injected varied between 1 c.c. and 2 c.c. of a 1:100 dilution and between 0.1 c.c. and 0.2 c.c. of a 1:10 dilution. One patient had bilateral frontal burr holes only, received no intraventricular medication, and was saved for a control. All patients were observed in the same environment for seven months. In order to differentiate transient from longer-lasting effects, medications were given during the first month of observation and then no further medication for a period of eight months.

RESULTS

In two cases transient clinical improvement followed shaving of the head only. One patient showed transient clinical improvement following bilateral frontal burr holes only.

In the other cases, within a few minutes of injection of Cholinesterase the grey cyanosis gave way to a pinkish flush. The technician noted that it had become easier to draw blood from superficial veins. The patient began to look about, apparently attending to what went on in his vicinity. The cerea flexibilitas was replaced by obedience to commands. Spontaneous activity appeared and seemed fairly appropriate to their situations. Then they all spoke—usually within eight to ten minutes of the time of injection and the slowest within a couple of hours. This usually consisted of monosyllables or short phrases, usually in answer to questions. Although in one of these three patients—he received only one injection of Cholinesterase—clinical improvement was observed only during the hour immediately following injection, the other two showed longer-lasting improvement. In one of these latter patients, a severe feeding problem which had been present for several months prior to treatment was alleviated for five months. The other, who had been mute for at least five year prior to treatment, was able frequently to carry on a rational conversation six months after his last injection. The control case was not helped by the burr hole or the concomitant increase in attention on the part of the medical personnel.

All four patients were exceedingly resistant to insulin before and after trephining. In each of the three patients who received Cholinesterase the resistance to insulin decreased and in the case receiving multiple injections it decreased progressively but in none of them did it ever become quite normal (figs. 1, 2, 3). Before and after the burr holes were made the electroencephalogram of all four cases showed the presence of rather low voltage high frequency activity, as rapid as 25 to 50 per second. Following the administration of Cholinesterase there was a characteristic change in the electroencephalograms—alpha activity began to interrupt or displace the low voltage

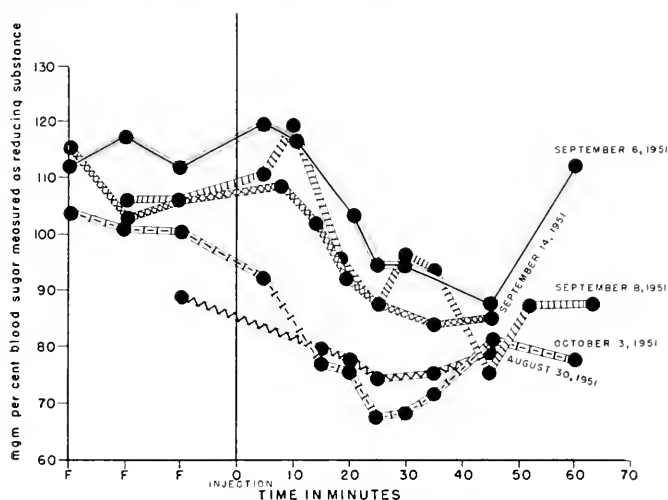


FIG. 1. Case 1, Insulin tolerance curves. The dates may be correlated with the case report

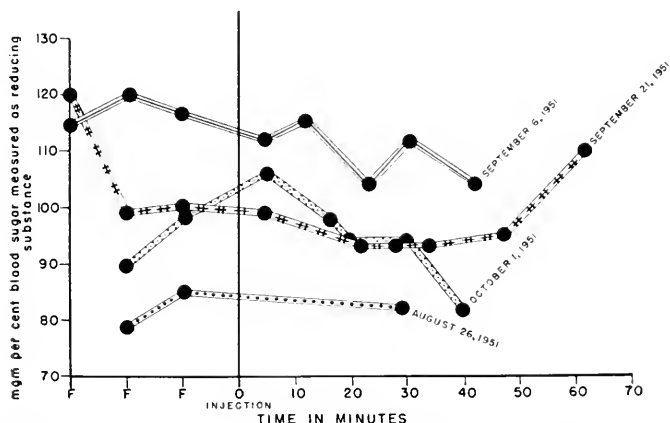


FIG. 2. Case 2, Insulin tolerance curves. The dates may be correlated with the case report

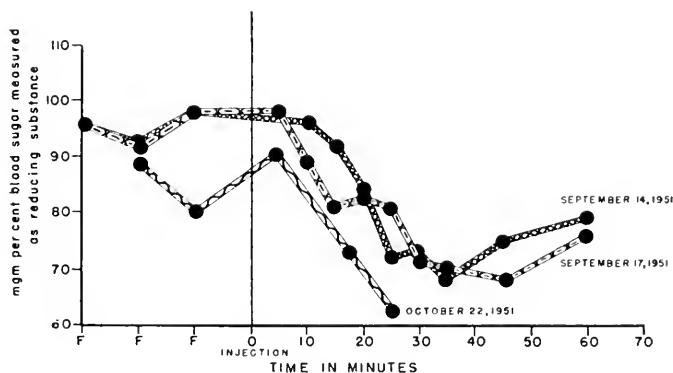


FIG. 3. Case 3, Insulin tolerance curves. The dates may be correlated with the case report

fast activity. The control case showed no change in his electroencephalogram or in his tolerance to insulin. A more detailed description of the electroencephalographic findings may be found in subsequent publications by one of us (2, 4). Within a few months of the time of injection in all cases the insulin tolerance tests showed some return of their resistance, and within seven months they had all drifted back to a state closely resembling that which they exhibited before injection of Cholinesterase.

Each of the two patients who had received multiple injections of Cholinesterase and who showed more than transient clinical improvement, deteriorated abruptly when transferred to a larger ward with which they were previously unacquainted.*

REPORT OF CASES

Case 1. W. H., white male, 24 years of age, was admitted to the Manteno State Hospital on August 25, 1950. His father, a heavy drinker, died in 1930 and the patient lived in a four room flat with his mother and sister. The patient did not walk or talk until he was three or four years of age. He entered parochial school at the age of 6½ years, was very slow to learn in school, and finished the eighth grade at the age of 16 years. He had difficulty in obtaining employment, was fired from several jobs, and then no longer sought employment. He had no social contacts after leaving school and went to the cinema every day. In November 1949 he withdrew from everything—no movies, no smoking, more quiet, refused food, did not go to bed until 3:00 or 4:00 A.M. and stayed in bed most of the day, would sit on toilet seat for hours at a time, would not eat food unless it was prepared for him, walked and talked slowly, did not shave, wash, or comb his hair. Shortly before admission to the hospital he began to show hostility toward his sister who was caring for him—did not want her to touch him, threw things at her when she came near him or awakened him in the morning.

Between October 1950 and December 1950 he received forty-four insulin shock treatments; between September 1950 and October 1950, ten electric shock treatments; between November 1950 and April 1951, thirty-six electric shock treatments; and between June 1951 and August 1951, ten electric shock treatments.

On examination in August 1951 he stood with head bowed forward and shoulders stooped. His arms hung loosely at his sides; there was no voluntary movement and no response to commands. There was evidence of weight loss with a long thin face, Schnautzkrampf, mouth hanging loosely open, and occasional grimacing. He had been mute for at least 14 months and there was no weeping or laughing. There had been a great feeding problem, having to be fed at all times; and in order to get him to swallow food when it was placed in his mouth he had been receiving several electro-shock treatments every few weeks. At no time had he fed himself. Waxy flexibility was pronounced; knee jerks and ankle jerks slightly hypoactive. He would not follow commands and would not follow objects with his eyes.

On September 4, 1951 bilateral frontal burr holes were made under local anesthesia. Prior to and following operation he was mute and did not follow commands. On September 7, 1951 at 5:00 P.M. one c.c. of 1:100 electric cel Cholinesterase was injected into the right lateral ventricle. Close observation of the patient was made for one and one half hours following injection but no change was apparent. Then at 8:30 P.M. he said "Hello" in answer to the greeting of an examiner, and although he did not engage in further conversation he did say "Goodnight" in reply to the examiner's bidding him goodbye. On the following day, although again mute, he would follow simple commands (e.g. "Raise your right arm"), and he showed a sardonic smile with fluttering eyelids when an attempt was made to engage him in conversation. By September 11th (four days after injection) he seemed more reluctant to initiate movement in response to command and it was necessary for the examiner

* Sherwood's Case 1 (3), after showing considerable clinical improvement for several weeks following intraventricular Cholinesterase, was found in catatonic stupor the morning following her going on a hospital picnic. This patient, as in our two cases, deteriorated after suddenly being placed in a large group of people in an unfamiliar environment.

to nudge the limb in order to initiate the motion; even then sometimes he paused during motion and another nudge was necessary to complete the maneuver. In response to questions, although he remained mute, the right side of his upper lip trembled along with a stretching of the right corner of the mouth to the right and occasionally his lips parted slightly.

On September 11th at 11:50 A.M. one and one-half c.c. of 1:100 Cholinesterase was injected into the left lateral ventricle. Three minutes after injection blood pressure 115/70, the pupils were slightly larger, the left more than the right; and seven minutes after injection when asked whether he would like some food he answered "Yes" in a low-pitched, very slow, whispering voice. Ten minutes after injection blood pressure 105/70. He then spontaneously flexed his neck, looked about, swallowed audibly, retched several times, and then again swallowed audibly a few times. He then lay supine and motionless except for smacking his lips together. Twenty minutes after injection he was propped up in bed with luncheon tray resting on his lower abdomen and thighs. The nurse fed him his first mouthful and thereafter he ate unaided using a spoon and taking large portions of food. Upon opening his mouth he displayed a rather coarse tremor of lips with slight tugging to the right of corner of mouth; this decreased with repeated acts. He stared straight ahead most of the time, glanced down when spooning food, and again when mouthing it. After finishing a dish of creamed meat the patient was asked what he would like most and he pointed slowly to a vegetable on the tray. In direct response to questioning he named coffee, milk, bread, and butter; but pears he called peaches, and was unable to name string beans. When asked "Which do you like better, milk or coffee?" he did not answer; but when asked "Do you want any more to eat?" he answered "No". When instructed to drink the milk and coffee he paused; then when told, "Take the milk first" he promptly, though slowly, reached with both hands for the cup with some tremor of fingers, and drank slowly in repeated sips usually looking ahead, sometimes at the examiner. After drinking his milk he laid his hands down at his side and had to be prompted to drink coffee and then did so. When he finished his coffee he was asked if he were finished and he answered "Yes". Then when asked if he wanted the head of his bed lowered he appeared to consider for a while and then said, "I don't know". He had consumed the entire content of his tray by 1:15 P.M. and five minutes later his blood pressure was 116/66. Toward the end of the meal again, upon request, he named each of the items on his tray (chicken, bread, butter, pears, milk, coffee) and when he came to the string beans which he had been unable to name before, he smiled and said, "String beans". He answered the greetings of other hospital personnel as they came in to observe him with "Hello", stated accurately "Yes" or "No" when asked whether he had seen them before or not, and exchanged "Goodbye" with them as they left. He followed simple verbal commands readily but slowly. He was left alone at about 1:30 P.M. and when visited again one-half hour later he no longer could be made to utter a sound, though he did continue to obey commands readily, but slowly as before. He continued to feed himself and follow commands but remained untidy of bowel and bladder. On the morning of September 12th when asked, "Did you eat breakfast", he answered "Yes". If his upper limb were elevated and outstretched passively, he would retain that posture until commanded to return the limb to resting position.

On September 13, 1951 two c.c. 1:100 Cholinesterase was injected into the left lateral ventricle. Blood pressure immediately before injection was 110/68. One minute after injection there was faint flushing of cheeks. Four minutes after injection blood pressure was 108/78 and patient began yawning. Nine minutes after injection when the examiner had begun to again rotate the head the patient vomited non-projectilely perhaps 75 c.c. semi-liquid partially digested substance. After vomiting he appeared to become suddenly aware of his surroundings. Blood pressure immediately prior to vomiting was again 108/68, and immediately after vomiting was 118/76. Ten minutes after vomiting his blood pressure was 96/60, and three minutes later it was 104/70. When asked whether he felt better he grunted apparently in the affirmative, but this was the only sound that he made following this injection. He did seem more aware of persons about him and looked consistently in the direction of verbal stimuli. He readily carried out simple verbal commands. During the ensuing days he continued to follow commands readily but it was sometimes necessary to nudge him in order to initiate movement. On September 15th, two days after injection, one of the attendants, wondering whether one of the other patients had eaten, asked this patient; and he promptly replied, "I don't know". The patient's family visited him on the following day, and, when they were unable to

engage him in any conversation, they thought that there was little change in him since injection. Whereas he had always walked with a wide base, head bowed, and slow deliberate short steps, an attempt was made on September 13th to get him to hold his head and shoulders erect and walk with a more normal base and stride. On each subsequent occasion this was accomplished only with repeated encouragement and instruction. On one occasion at this time one of the nurses entered his room as he was looking out the window. Hearing her enter the room he turned around, looked at her, and smiled. This was the only occasion on which he was observed to smile spontaneously. When she started to take his blood pressure he held out his arm without being told to do so. Throughout the period after this injection and previous injections he continued to soil his clothing and was observed on frequent occasions sitting or standing barefoot in a puddle of urine. This was in spite of the fact that he had been instructed to use the bathroom on such occasions. On one such occasion, on September 25th, the examiner pointed at the puddle of urine on the floor and asked the patient what it was. He replied, "Water". On September 23rd and 24th he consistently answered simple questions in audible monosyllables (usually "yes" or "no").

On September 28th Cholinesterase was again injected intraventricularly—this time in a dilution of 1:10 as contrasted with the previous dilution of 1:100. At 10:15 A.M. 0.15 c.c. Cholinesterase was injected into the left lateral ventricle. Blood pressure at 10:13 A.M. was 108/68; at 10:47, 94/86; and at 10:55 A.M., 92/62. By 15 minutes after injection he was able to follow commands readily. Circumstances prevented any further observation immediately after injection, but later that evening he answered questions readily and accurately with a "yes" or "no", followed commands readily, and again upon questioning described urine on the floor as "water". No further speech was elicited until October 10th, almost two weeks after injection; at which time when asked if another patient had eaten his breakfast, he replied, "I don't know". Likewise when asked whether he had awakened by himself or had been wakened by someone else, he responded in a low tone, "Woke up myself". Subsequent questions got no audible reply but occasionally an appropriate nod of the head. He continued to eat slowly but feed himself all of his meals and ate rather well. Likewise he continued to be untidy with particles of food and drink about his lips.

His appetite remained good and, whereas prior to the institution of this treatment he had to be given electric shock—three to four treatments every three weeks—in order that he would swallow the food after it was placed in his mouth, he was at that time feeding himself and consuming an adequate diet. He continued to follow commands well, show an interest in his surroundings, and answer questions occasionally with monosyllables until about the middle of November when his condition began to deteriorate. Whereas in recent weeks he had looked up immediately when someone came into the room he now seemed much more slow to do so. He was slow to eat and on some occasions ate nothing at mealtime. He was lethargic and indifferent and seemed prone to spend most of the time lying in bed. He seemed more pale than he had been, and even after being exposed to cold weather he remained pale. Blood pressure remained about the same; 100/62 on November 23rd. On November 26th, while being taken to the bathroom by one of the attendants, he suddenly collapsed and fell to the floor. Apparently there was no loss of consciousness and no involuntary movement. Blood pressure immediately following this episode was 92/60. Several days later the patient's sister was very alarmed at his deterioration and asked, "He has appeared to be doing so very well. What has happened to him?" By the end of November the skin of his bony prominences had become reddened and slightly excoriated. He seemed constantly to lie in bed supine with tense flexion of the neck and a somewhat grimacing face, frowning as if experiencing repugnance or anxiety. When interrogated in a conversational tone the only detectable response was limited to brief soft grunts which seemed to be sounds of distress. Waxy flexibility was readily demonstrable.

With the intention of again injecting Cholinesterase the head was shaved on November 30th. Upon visiting the patient about an hour after shaving of the head he was found to be much more aware of his surroundings and much more alert than previously. Although no speech was elicitable he did follow commands readily. An independent observer, seeing the patient several hours later, felt certain that Cholinesterase had been injected. He continued to follow commands and eat fairly well until about the middle of January, 1952, at which time he appeared markedly emaciated and weak and spent most of his time lying supine in bed. While sitting on a chair he allowed his head to rest at pronounced flexion of the neck, a posture which was soon resumed after the head was

passively placed erect. The eyelids were opened wide and the pupils were large. He received parenteral feedings for several days and within a week again appeared fairly well nourished. This situation prevailed without change until the middle of March at which time he again deteriorated spending most of his time lying abed, supine and limp, with a facial expression suggesting helplessness, bewilderment and despair. The pupils were of normal size and waxy flexibility was present. The face was greasy in appearance and to touch and smell. He obeyed simple commands slowly; and movements of the extremities were always accompanied by motions of his eyes and usually also of the right side of his face. The eyes turned sharply upward, if not also to right or left and the eyelids partly closed so that there was visible of each eye only a wide scleral crescent. There was also a rapid trembling about the eyes and a tense pulling of the right corner of the mouth upward and to the side, creating the appearance of a sardonic smile. Because of the feeding problem he was again placed on parenteral and tube feedings.

Case 2. S. P., white male, was born on August 12, 1912. There were no complications at time of birth; early development and childhood were uneventful. In his adolescence he was described as easy-going and helpful about the house, and at one time he won a golf tournament among the cadets at a local golf course. He completed high school and then worked as a foreman in a foundry. His father died in 1939; and his mother, wife, and two daughters are living and well.

He showed no evidence of nervous or mental disease until 1941 when he expressed fear that he might be arrested because of his association with Germans at his place of employment. One month later he became impulsive, anti-social, irritable, and attempted suicide by slashing his wrist. He was hospitalized in a private sanitarium where he received eight electric shock treatments, and then in another sanitarium where he received both electric shock and insulin. Although he improved somewhat, he began to show homicidal tendencies, especially toward his wife and children. In November, 1943, he was admitted to the Manteno State Hospital where he received fourteen electric shock treatments and forty insulin shock treatments. After eleven months hospitalization he was allowed to return home, living with his parents and seeing his wife and children on weekends. He adjusted fairly well for the first two months but then gradually began to deteriorate and frequently went to his wife's home—standing before the house and staring for hours at a time. Although he was obedient and did everything he was told to do, he did not utter a word after October, 1947. He would neither speak nor write replies to questions. In March, 1948, he was re-admitted to the Manteno State Hospital. At that time he was mute, obeyed orders in an automatic fashion, and was classified as schizophrenia, catatonic type.

On examination in August, 1951, he was mute but did appear to comprehend questions and answered with merely a nod of his head. There were sporadic occasions when he would answer questions with a monosyllabic grunt. Particularly characteristic of his behavior was a posture with shoulders bowed slightly forward, arms hanging loosely at his side, and answering of questions with shrug of his shoulders. On September 4, 1951, bilateral frontal burr holes were made under local anesthesia. For three days following operation he showed marked improvement—very talkative, responded readily and rationally to questions, and fed himself, eating well. By the fourth day after operation, however, he was again mute but appeared to understand questions and answer them with the appropriate nod of his head and shrug of his shoulders. It was discovered two weeks after operation that, although he would not answer a question, if one were to ask him the question and then instruct him to say either "yes" or "no" he would do so. In this manner he could also be made to spell his name. He remained untidy at all times.

On September 21st, 1.2 c.c. of 1:100 Cholinesterase was injected into the left lateral ventricle. Blood pressure immediately prior to injection was 114/76, and five minutes after injection was 116/70. There was no immediate change in his behavior. Approximately ten minutes after injection he was placed in a sitting position and when asked how he felt, he nodded his head in the affirmative. He was then instructed to say "Yes" and did so; then spelled his last name when instructed to do so. The following conversation ensued:

Q. Where is your home?

A. Do you mean here or in Chicago?

Q. In Chicago.

A. I don't have any.

Q. Do you have any sisters or brothers?

A. Yes. (He bowed his head and did not amplify on the number, sex or names of his relatives; and, since it seemed to make him withdraw, the point was not pressed.)

Q. What sort of work do you do?

A. I don't do any work.

Q. What is the name of this place where you are now?

A. Manteno State Hospital.

Q. How long have you been here?

A. I don't know, a long time.

Q. What sort of work did you do before you came here?

A. I did foundry work.

Q. What sort of foundry work? Were you a moulder or a pourer?

A. No, I just did foundry work.

Q. Did you like it?

A. It was all right. (shrugging his shoulders)

Q. What would you like to do now?

A. He nodded to indicate that he would like to lie down in bed.

Q. Would you like to continue sitting up, get up and walk around, or would you rather lie down?

A. He again nodded to indicate that he would like to lie down but could not be made to express this wish in words.

Blood pressure fifteen minutes after injection was 115/84. It was not subsequently found possible to get the patient to say anything other than a sporadic "yes" or "no" until three days after injection when he had had some visitors who had brought him some fruit and candy bars. Upon being questioned he stated that some visitors had brought it for him and named correctly each of the fruit and candy items. When asked what kind of candy bars they were and what they were made of he answered "Dextrose". When asked how he knew this he said he had read it on the wrapper. This fact was not mentioned on the wrapper of the candy bars which he had and when asked to point out the word Dextrose on the wrapper he looked at the wrappers for several minutes, examined them thoroughly, and then said, "It is not there; I guess I must have read it somewhere." He again repeated the conversation outlined above concerning his home and occupation but again seemed to withdraw when mention was made of his family.

He remained in about the same condition, occasionally answering questions with a "yes" or "no," eating well, and untidy, for about four weeks after injection; and then became very lethargic spending the entire day lying in bed with the sheets pulled up over his head. When one attempted to lift him out of bed he merely sank back limply. When, however, he was placed in a standing position he maintained the standing posture, although he seemed to have his head more downcast than before; the characteristic shrugging of his right shoulder and turning his head to the right remained the only answer to most inquiries. This lying in bed helplessly persisted for a period of five weeks. During this time, however, he continued to eat well, meticulously emptying each plate and then licking it with his lips, running the rim of the plate around his lips and then literally scraping the plate with his fingernail and then licking it again.

On November 28 he appeared to be improved slightly in that he was slightly more aware of his environment and seemed to take more interest in what was going on about him. On December 1 his head was shaved preparatory to injecting Cholinesterase but upon entering the room to carry out injection he appeared more alert than usual and again he responded verbally to questions concerning his home and occupation. After asking him the same series of questions he suddenly said, "You just asked me all these questions several days ago, why are you asking me again?". Although he did not again converse readily in this manner he continued to show alternating periods of lying in bed with the sheets over his head facing the wall with no response whatsoever to commands, and responding to questions with nods and shrugs and obeying simple commands rather abruptly. In March, 1952, he was transferred from the acute hospital to a larger ward. Whereas he had been for seven months in a room with four other patients he was now in a sixty bed dormitory. He abruptly withdrew, spending the entire day lying in bed with the sheets pulled up over his head and eating very little at mealtime.

Three weeks later he was transferred back to the ward on which he had been hospitalized before the institution of treatment. There the attendant who had cared for him for three years before intraventricular medication had been given was very impressed with the change in the patient. Whereas previously it had always been necessary to escort the patient into the dining room at mealtime he now joined the queue and followed the other patients into the dining room, picked up his tray, carried it to the table, and consumed its contents. All of this was done spontaneously and without any instruction or persuasion on the part of the attendants. Even more impressive was the fact that the attendants had never heard him speak, and now he not only answered questions rationally but at times carried on a rational conversation. A specific example of the latter was his ordering cake and ice cream from the commissary when orders were being taken from the patients.

Case 3. R. P., white male, was born on February 21, 1911 of Czechoslovakian parents. His parents are living and he is the youngest of six children. Three siblings died in infancy. All the children had a strict upbringing; and the patient was always bashful, no girl friends, no smoking, and only an occasional glass of beer. He was always shy and quiet, read a lot, and was clean and tidy. He completed three and one-half years of high school, was considered a good student, and then attended night school two nights a week to study printing. In May, 1949, he became seclusive and had to be urged to eat and to care for himself; he complained of fatigue, became depressed, refused food, cried and laughed at intervals, and was very restless although he had always been a sound sleeper. He imagined someone was chasing him and trying to take him away, moaned a great deal as though in pain and complained of pounding in his head. Two years prior to the onset of mental symptoms his father had begun talking to himself, criticizing his neighbors, pacing up and down the floor and hearing voices. When the patient was urged to go out he replied that his father always stayed at home and he wanted to stay home as well. He was admitted to the Manteno State Hospital on August 3, 1949, two and one-half months after the onset of his symptoms. He showed on initial examination waxy flexibility, command automatism and was mute. In 1950 he had 34 metrazol treatments and in 1951 fifteen more, with little or no improvement.

On examination in 1951 he was mute, untidy and frequently would maintain an anti-gravity posture for prolonged periods. His sitting and standing postures were characterized by his head being bent forward, eyelids drooping and upper limbs closely adducted. During repeated interviews and examinations he was completely mute except for grunting on one or two occasions. On September 27th bilateral frontal burr holes were made. Approximately half of the operative procedure was carried out under local anesthesia, but then he became very restless and when sodium amytal was administered became more restless. Although a total of 20 grs. of sodium amytal was given intravenously he was still restless at the termination of the procedure.

He was observed for a period of three weeks after operation and then, since his behavior was unchanged, Cholinesterase was injected into the right lateral ventricle on October 15, 1951. Blood pressure immediately prior to injection was 134/86 and seven minutes after injection was 130/82. Cholinesterase, 2 c.c. of a 1:10 concentration, was injected into the right lateral ventricle. Although questioning was begun immediately following injection no response was obtained until eleven minutes after injection at which time he began to show a form of echolalia. When asked his name, although he looked at the examiner and appeared to realize that he was being questioned, he said nothing. Then when instructed "Say: my name is R—— P——", he immediately answered "Say my name is R—— P——". Following this he repeated a number of other such phrases as "Say Harry Truman is President of the United States". An attempt was made under these circumstances to test his digit span forward and backward. He was able to repeat six numbers forward but it was very difficult to explain to him the procedure of repeating the numbers backward. He would first say the numbers as they had been given him and then repeat them backwards. He was able to repeat three such numbers. He spoke in a clear intelligible voice, head and eyes still downcast with no associated movement of any other part of the body but speech was explosive and without hesitation. Following this he was asked where he was and when he did not answer he was instructed to say "Manteno State Hospital" and did so. Following this a picture of a man was drawn and when it was shown to him and he was asked what it represented he said "Manteno". A picture of a house was then drawn but when asked what it was he gave no answer. By this time it was approximately twenty-five minutes after injection, and he seemed fatigued. Also during this time he

would follow simple commands readily but not with the automatism which had typified him in the past. Since that time he has not been heard to utter a sound. Blood pressure at that time was 144/90.

Although he remained mute, he continued to follow simple commands for approximately three weeks after which time he reverted to his former state; no longer following commands, frequently maintaining an anti-gravity posture, and appearing to be totally unaware of the presence of the examiner. He usually fed himself but frequently it was necessary to place the first few mouthfuls in his mouth before he would do so. He has remained in this condition since early November of 1951. His face at all times has a pained expression. The automatic obedience of commands was noted on only one occasion—October 28, 1951, while movies were being taken. Transferring him to another ward in March, 1952, did not alter his behavior.

Case 4. A. H., white male, was born on May 17, 1921. His father was born in Hungary and was an excitable individual who had temper tantrums during which he beat his wife. The mother of the patient was born in Hungary, had five years of schooling, speaks four languages and is in good health. There are two sisters who are living and two sisters who are dead. He sustained a moderately severe head injury at the age of three. As a child he had many friends, liked to play games; but had a bad temper, was obstinate and wanted his own way. He had frequent fights with his sisters, even as a youngster.

At no time did he show any interest in girls. He completed two years of high school, but then began to fight with other boys at school after which he quit school. He never got along well with his father who beat him frequently, and he obeyed his mother much better than his father. In the summer of 1936 he broke his glasses and, when he found it would take several hours to have them repaired, he threw knives and scissors at his mother and called her names. He became restless, angered easily, would not eat with the rest of the family, frequently locked his mother out of the house, had auditory hallucinations and paranoid ideas, and was resistive and untidy. He lost 50 lbs. weight in a short time. In November, 1936, he was hospitalized for one week in a Chicago sanitarium. Following this he refused to go to church, would not associate with any of his friends, would not bathe or change clothes, talked to himself constantly, and thought voices from Heaven were talking to him. Also he thought people were looking at him through the walls of the house, and thought neighbors were talking about him and frequently told them to mind their own business. In January, 1938, he was arrested for injuring his mother severely enough to necessitate her hospitalization.

He was admitted to the Manteno State Hospital on March 5, 1938, at which time physical examination was normal except for poor vision. Blood Wasserman and Kahn were negative and blood pressure was 110/70. In April, 1938, he completed a course of metrazol shock treatments and shortly after this made an attempt to escape from the hospital. In December 1938 he was described as fairly neat and tidy and well oriented as to time, place, and person. He spent most of the day idly sitting on the ward, quiet and cooperative. He gradually deteriorated and was described in 1941 as dull, indifferent, and in poor contact; in 1942 as deteriorating, destructive, mute and following commands; in 1945 as untidy, out of contact, and vegetative.

On examination in August 1951 he was found to be mute, totally out of contact, and hallucinating. His most characteristic posture was standing on one foot with his head turned to one side, upper limbs closely adducted to his body, head and shoulders downcast, and with his mouth almost always full of foreign bodies. Frequently he would suddenly look down at his hands or over into one corner of the room as though looking at some object which amused him. On these occasions he had a faint smile on his face and usually chuckled or laughed quietly to himself. He did not follow any commands and indeed usually became combative when an attempt was made to get him to do something. During these periods of resistance his facial expression became slightly defiant and angry and he pulled his arm away rapidly. His gait was always the same, taking a few running steps, very short and very effeminate, with upper limbs closely adducted to his body and head and shoulders slightly downcast. Then he would pause for a moment, frequently standing on one foot, and then run a few more steps and pause again in the same manner. This type of gait was also present when the examiner would take him by the arm and physically encourage him to walk. At meal time when the tray was placed before him he did not seem to be aware of its presence but after two to three minutes he would begin to eat and consume the entire content of his tray.

On September 27, 1951, under sodium pentothal anesthesia, bilateral frontal burr holes were

made. Despite the administration of a large amount of sodium pentothal he remained restless throughout the procedure. There was no change in his condition following operation and there was no change in his condition up to eight months after operation, the period of observation. No intraventricular medications were given. In April 1952 he was transferred back to the ward on which he had been hospitalized for two years prior to institution of treatment. The attendants on that ward stated that he seemed to follow commands a bit more readily than when they had last seen him, but that other wise they noticed no change in him.

SUMMARY

Bilateral frontal burr holes were made in four long-standing, insulin-resistant, mute waxy, incontinent catatonics.

One of these patients was treated with multiple injections of intraventricular Cholinesterase; two with a single injection. All three patients showed immediate clinical improvement beginning within ten minutes after injection and most marked during the hour following injection. This improvement consisted of long-standing mutism being replaced by the ability to rationally answer questions (usually in monosyllables), disappearance of waxy flexibility and pallor, increased awareness of surroundings and ability to carry out simple commands. In one of these patients a severe feeding problem was relieved for five months; another frequently was able to carry on a rational conversation seven months after the last injection. In the third case the only clinical change noted was in the hour following injection. After this the patient reverted back to his former state and has so remained since that time.

Following administration of Cholinesterase, the insulin tolerance test showed less resistance to insulin, and, in the electroencephalogram, abnormally fast low voltage activity was replaced by normal alpha. Several months after treatment the tests and tracings returned to their former state.

In one case transient clinical improvement followed bilateral frontal burr holes only; in two cases transient clinical improvement followed shaving of the head.

There was no change in one patient following burr holes only.

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REFERENCES

1. BRACELAND, F. J., MEDUNA, L. J., AND VAICHULIS, J. A.: Delayed action of insulin in schizophrenia. *Am. J. Psychiat.*, 1945, **102**: 108-110.
2. FARRELL, J. P. AND SHERWOOD, S. L.: The alpha correlate to behavior changes produced in psychotics by intraventricular injections. *EEG Clin. Neurophysiol.*, 1956, **8**: 713.
3. SHERWOOD, S. L.: Intraventricular medication in catatonic stupor (preliminary communication). *Brain*, 1952, **75**: 68-75.
4. SHERWOOD, S. L.: The response of psychotic patients to intra-ventricular injections. *Proc. R. Soc. Med.*, 1955, **48**: 855-864.
5. SHERWOOD, S. L., RIDLEY, E., AND McCULLOCH, W. S.: Effects of intraventricular Acetylcholine, Cholinesterase, and related compounds in normal and "catatonic" cats. *Nature, London*, 1952, **169**: 157.

THE CONTRIBUTION OF THE UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE TO THE INITIAL DEVELOPMENT OF THE JOHNS HOPKINS HOSPITAL AND THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE

ALAN M. CHESNEY, M.D.*

DEAN EMERITUS OF THE MEDICAL FACULTY OF THE JOHNS HOPKINS UNIVERSITY

The contribution of The University of Maryland to the initial development of first The Johns Hopkins Hospital, and, later, of The Johns Hopkins University School of Medicine, is to be reckoned in terms of men and not in terms of money or buildings. That fact, however, does not lessen the value of the University's contribution in any respect. Rather it enhances that value for, as you well know, it is only man that can contribute ideas, knowledge and experience, and these are the most important ingredients in the initiation and development of any human enterprise.

Who were these graduates of the University of Maryland who by their knowledge and experience had a hand in the shaping of the two institutions which that shrewd old Quaker merchant and banker, Johns Hopkins, established in this city shortly after the end of the Civil War? Any attempt to answer that question must of necessity begin with Mr. Hopkins himself.

There is abundant evidence to show that Johns Hopkins knew intimately and consulted with two physicians who were graduates of the University of Maryland and practised here in Baltimore. He must have had great confidence in these two men for he made one of them, Dr. John Fonerden, a trustee of both his hospital and his university, and the other, Dr. Alan Penniman Smith, a trustee of his hospital. Both were born in Baltimore.

Dr. Fonerden (1802-1869) received his M.D. degree from the University of Maryland in 1823 and from 1846 until his death in 1869 he was Medical Superintendent of the Maryland Hospital for the Insane. Johns Hopkins was a member of the Board of Managers of that institution, which stood on the site now occupied by The Johns Hopkins Hospital, and must therefore have seen a good deal of Dr. Fonerden while connected with that institution. It has been said that Fonerden was not only the personal friend but also the physician of Mr. Hopkins, and had great influence with him. He was secretary of the Medical and Chirurgical Faculty of Maryland from 1828 to 1834, and was its first Librarian. He died four years before Mr. Hopkins and therefore played no part in the actual carrying out of Mr. Hopkins' plans.

* (Dr. Chesney was the principal speaker at the Sesquicentennial Convocation, June 7, 1957—Ed.)
(Introduction)

Dr. Stone, Distinguished Guests, Members of the Graduating Class, Ladies and Gentlemen:

I count it a great honor and a high privilege to be permitted to share in these exercises which commemorate the one hundred and fiftieth anniversary of this venerable School of Medicine which, in spite of its advanced years, shows no signs of senility but, on the contrary, abundant signs of vigor and an ability to grow stronger with each succeeding year. Permit me to offer my sincere congratulations on this happy birthday.

The other physician, Dr. Alan P. Smith (1840–1898), was the son and grandson of distinguished medical men. His father, Dr. Nathan R. Smith, was a Professor of Surgery in the University of Maryland and was known to the students and Faculty of the School as “The Emperor”. The son received his M.D. degree from the University in 1861, taught anatomy and surgery there, and became a successful practitioner in the city. He was particularly successful with operations for stone in the urinary bladder. Like Fonerden, he was also a member of the Board of Managers of the Maryland Hospital for the Insane, and, after Fonerden’s death, became Mr. Hopkins’ personal physician.

In addition to these two original physician-trustees, there was one other University of Maryland graduate who became a trustee of The Johns Hopkins University and who may well have given Mr. Hopkins some advice, for both men belonged to the same religious sect, namely, the Society of Friends, and knew one another through that medium. This person was Dr. James Carey Thomas (1833–1897), a member of a well known Baltimore family, who was elected to his trusteeship in 1870, while Mr. Hopkins was still alive.

Dr. Thomas graduated from Haverford College, as so many of our good local Quakers have done, and then obtained his M.D. degree from the University of Maryland in 1854. A very devout man, he became a minister in the Society of Friends and devoted much time to philanthropic enterprises in Baltimore. He was greatly interested in higher education for women as well as for men, and one of his daughters, Miss M. Carey Thomas, who became Dean and later President of Bryn Mawr College, had much to do with the raising of funds for the establishment of the Hopkins School of Medicine. His son, Henry M. Thomas, as we shall see later, also graduated from the University of Maryland and became associated with the Hopkins Hospital and the Hopkins School of Medicine in their earliest days.

These, then, were the three University of Maryland graduates who were in a position to advise Mr. Johns Hopkins himself in respect to hospital matters and to medical education, and two of them, who continued to serve as trustees long after Mr. Hopkins’ death, contributed significantly to the subsequent development of the Hospital and the University.

Let us look now at the contribution made by graduates of the University of Maryland to the Hopkins Hospital and the Hopkins School of Medicine at the professional level. Here the story is indeed a very striking one, but in order fully to understand it one must first understand several basic facts about the Hopkins institutions themselves.

The first of these facts is that The Johns Hopkins Hospital and The Johns Hopkins University are two entirely separate corporations, each with its own charter, its own funds, and its own board of trustees. The second fact is that the Hopkins School of Medicine is an integral part of the University and does not belong to the Hospital, although it necessarily enjoys the closest affiliation with that institution. The third fact is that the Hospital opened four and a half years before the School of Medicine.

When, in 1889, after a building period of twelve years, the Hospital was finally ready to open its doors, there arose the necessity of organizing a professional staff for the institution. For this purpose the authorities went beyond the borders of Balti-

more and Maryland to select the heads of the clinical departments. They already had an experienced pathologist in the person of Dr. William H. Welch, who had been appointed Professor of Pathology in The Johns Hopkins University five years before, but they still had to have someone to head up each of the three main clinical departments they were proposing to establish at the start, namely medicine, surgery, and gynecology. It was not proposed at that time to establish an active obstetrical service, but it was recognized, of course, that there would have to be a resident staff. On the initiative and advice of Dr. Osler it was decided that this resident staff should consist of a chief resident for each of the three clinical services who should be a man of considerable experience in the care of patients and should have one or more assistants, again with more experience than the recent graduate in medicine. Moreover, provision was made that these men might hold their positions for an appreciable period of time so that they might gain a greater experience and training than was obtainable in the other American hospitals of that day. Thus the American hospital residency system, as we understand that term, was born right here in Baltimore in 1889.

Now each of the three men who came to the Hopkins Hospital in 1889 to head up a clinical department, namely Drs. Osler, Halsted and Kelly, brought as his chief resident, a graduate from a school outside the State of Maryland, but of the five individuals who were appointed as assistant residents on the three clinical services which were authorized at the opening of the Hospital, two were graduates of the University of Maryland. These were D. Meredith Reese and George E. Clarke, both members of Maryland's Class of 1889.

Two graduates of the University of Maryland also played an important part in the staffing of the Department of Pathology when the Hopkins Hospital opened and both of these gentlemen were destined to have distinguished careers.

The first, Dr. William T. Councilman, was born at Pikesville in Baltimore County, and was the son of a physician who practised in that county. He graduated from the University of Maryland in 1878 and at once entered The Johns Hopkins University as a graduate student in biology, working in the laboratory of Professor H. Newell Martin, the celebrated biologist. Here Councilman carried out an original investigation on inflammation of the cornea which won him a prize of \$100. He acquired an abiding interest in pathology and went abroad in 1880 to study the subject under von Recklinghausen at Strassburg and Cohnheim at Leipzig. Returning to Baltimore after three years he taught pathology in two local medical schools and performed autopsies at the Bay View Asylum. When Dr. Welch came to the Hopkins in 1884 to be its first Professor of Pathology he found Councilman already working in that subject and at once recommended him for an appointment in the Johns Hopkins University as Associate in Pathology. In due time he became Resident Pathologist to the Johns Hopkins Hospital, the first to occupy that post, and as such he was Dr. Welch's right hand man.

Councilman was what would be called a "colorful" figure nowadays. Short, stocky, and of florid countenance, he stuttered slightly which gave an amusing twist to his profanity which was not minimal in amount! It is said that he used to transport his pathologic specimens from Bay View to the Hopkins in pails suspended from the handlebars of his bicycle. If true, that was no mean feat considering that Baltimore's

streets were paved with cobblestones in those days. In 1892 he left Hopkins to become Shattuck Professor of Pathology at Harvard University and when the Peter Bent Brigham Hospital opened later on he was appointed its Pathologist. The University of Maryland can well be proud of the fact that he was one of its graduates.

The other University of Maryland graduate who played an important role in the Hopkins Department of Pathology in the beginning was Alexander C. Abbott. Abbott was born in Baltimore (Feb. 26, 1860) and worked as a machinists' apprentice in the locomotive shops of the Baltimore and Ohio Railroad Company for four years before taking up the study of medicine. He graduated from the University of Maryland in 1884, ranking second in his class, and then studied pathology under Dr. Welch as a regularly enrolled graduate student in The Johns Hopkins University in the year 1886-87. Dr. Welch suggested that he prepare for a career in public health and that he go abroad for study. This Abbott did, working in the laboratory of von Pettenkofer in Munich and then in Robert Koch's laboratory in Berlin. Returning to Baltimore in 1889 he was given an appointment on the staff of the Hopkins Hospital in bacteriology and hygiene, and was given living quarters in the institution, so that he was in reality a member of the Hospital's first resident staff.

In 1890 he left the Hopkins to become an assistant to Dr. John Shaw Billings, who had assumed the post of Director of the Laboratory of Hygiene of the University of Pennsylvania. In 1896 he succeeded Dr. Billings in that post and later became Chief of the Bureau of Health of Philadelphia. Abbott too, is a son of whom the University of Maryland may well be proud.

Perhaps, at this point, it may be well to summarize the relation of University of Maryland graduates to the first resident staff of The Johns Hopkins Hospital by saying that of a total of ten individuals on that staff four, or forty per cent, had obtained their M.D. degrees at that University.

It is now time to turn our attention to the relation of University of Maryland graduates to the Out-Patient Department of The Johns Hopkins Hospital. As we have already seen, when that institution opened there was provision for only three major clinical departments, medicine, surgery and gynecology, but since other specialties in medicine had already been recognized by that time it was necessary to give them recognition if the patients of the hospital were to receive complete care. Accordingly those special fields were recognized by establishing divisions in the Out-Patient Department to take care of the patients whose illnesses fell within those special fields. It then became necessary, of course, to find competent doctors to head up those special divisions and it was here that graduates of the University of Maryland proved to be particularly helpful.

For the division embracing the diseases of the nervous system the authorities of the Hopkins Hospital turned to Dr. Henry M. Thomas (M.D. 1885), for diseases of the genito-urinary system to Dr. James M. Brown (M.D. 1867), for diseases of the eye and ear to Dr. Samuel Theobald (M.D. 1875) and to Dr. Robert L. Randolph (M.D. 1884), and for diseases of the skin to Dr. Robert B. Morison (M.D. 1874). Thus four of the five special divisions in the Out-Patient Department of The Johns Hopkins Hospital when it opened in 1889 were headed up by five University of Maryland graduates and I should like to take a few moments to say a brief word about all of these men.

Dr. Thomas (1861-1925) was the only son of Dr. James Carey Thomas, The Johns Hopkins University trustee who has been mentioned earlier. He studied at Haverford College and then took special courses in The Johns Hopkins University. Following his graduation from the University of Maryland in 1885 he studied pathology under Dr. Welch and prepared himself for his specialty, diseases of the nervous system, by study at the University of Heidelberg. He was a successful practitioner in Baltimore and his patients were devoted to him.

Dr. James Brown (1854-1895) was a native of Baltimore and for a time Resident Physician at Bay View. He is said to have been the first person ever to catheterize the male ureter in a living human being. He died suddenly at the comparatively early age of forty-one years, thus cutting short a promising career in his chosen field, urology.

Dr. Samuel Theobald (1846-1930) was the son of a physician and was born in Baltimore. After graduating from the University of Maryland in 1867 he studied in Vienna and London and then returned to his native city. He was one of the founders of the Baltimore Eye, Ear and Throat Charity Hospital and served as Ophthalmic and Aural Surgeon to that institution. He is credited with having introduced the use of boracic acid in the treatment of infections of the eye.

Dr. Robert L. Randolph (1861-1919) was also a Baltimorean and also prepared for his specialty by study in Vienna. Before entering the University of Maryland he took courses in physics, chemistry and biology in The Johns Hopkins University and after graduation in medicine from the University of Maryland took courses in pathology under Dr. Welch. He was a very effective teacher and carried a heavy burden of instruction in the Hopkins School of Medicine.

Dr. Robert B. Morison (1853-1897) was born in Baltimore and was the son of Nathaniel Morison, the first Provost of the Peabody Institute of Baltimore. He too prepared for his specialty, dermatology, by studying in Vienna, but unfortunately he died at the comparatively early age of forty-four years, and his connection with The Johns Hopkins Hospital was therefore brief.

Of the five foregoing graduates of the University of Maryland who occupied responsible positions in their respective fields in the Out-Patient Department of The Johns Hopkins Hospital during the first year of its existence, three attained professorial rank in the Hopkins School of Medicine after it opened in 1893 and the remaining two would undoubtedly have done so had they lived a few years longer.

There remains but one more University of Maryland graduate who contributed to the development of the Hopkins Hospital and the Hopkins School of Medicine in their first years and therefore belongs on our list. I would place him at the top of that list because of the quality as well as the magnitude of his contribution to the Hopkins. I refer to Dr. John Whitridge Williams, who was born in Baltimore (January 26, 1866), obtained his A.B. degree from The Johns Hopkins University in 1886 and his M.D. from the University of Maryland in 1888. He may be regarded therefore as a joint alumnus of the two institutions, and surely both can be proud of him. After post-graduate study in Vienna and Berlin he returned to Baltimore and after serving as a voluntary assistant in Gynecology in the Out-Patient Department of The Johns Hopkins Hospital, was finally, in 1891, given a regular appointment in that division

in the Out-Patient Department. From that time until his death forty years later his entire professional career was devoted to the Hopkins. When the School of Medicine was opened in 1893 he was given the responsibility of teaching obstetrics to the medical students and of organizing an independent obstetric service in the Hospital. In 1899 he was made Professor of Obstetrics and in 1911 he was appointed Dean of the Hopkins Medical Faculty. He held that post until 1923, when he resigned from it to devote his entire time to the organization of the Hopkins Department of Obstetrics on a full-time basis. He was an inspiring teacher, a successful administrator, the author of an outstanding text book and, at the height of his career, the leading obstetrician in the country. Perhaps you can understand now why I have saved him for the last of my story.

Perhaps I may summarize that story very briefly by saying, as I did in the beginning, that the influence of the School of Medicine, University of Maryland, upon the initial development of The Johns Hopkins Hospital and The Johns Hopkins University School of Medicine was manifested through some of its graduates who served on the first resident staff of the Hospital, and through others who contributed their ideas, their knowledge and their experience to the initial organization and development of the clinical work of the Out-Patient Department of the Hospital, and, later on, to the instruction of the medical students in the special medical fields which they cultivated. It was of great importance to both Hopkins institutions, the Hospital and the School of Medicine, that they found ready at hand in Baltimore such competent and skilful physicians and surgeons who could help these two new enterprises in their formative years, and it is greatly to be hoped that the authorities of The Johns Hopkins Hospital and of The Johns Hopkins University School of Medicine will never forget that in the early days of both institutions their predecessors had the great advantage of being able to secure the services of some outstanding graduates of the University of Maryland to aid them in the development of the two institutions for which they were responsible.

OBSTETRICAL CASE REPORT*

N. E., a 19 year old, white, Para 0-0-0-0, was admitted on March 15th with right sided abdominal pain. She had her last menstrual period on September 3, 1956. She was then in her 27th week of her first pregnancy. The pregnancy so far was uneventful. She was seen in the fourth month for prenatal care and internal examination showed some thickening in the right adnexa which was considered inflammatory in nature. No actual history of previous inflammation could be confirmed. Otherwise, her family and past history was not contributory.

On the morning of her admission date, the patient was in good health and swept the porch with a broom. Suddenly, she felt severe pains in the right flank which continued to radiate in the epigastric area and in the inguinal region as well. The pains were not relieved by bed rest. In the early afternoon, the patient started to vomit, felt weak and cold. Because of continuous pain, she was brought to the hospital.

On admission, the patient displayed the following signs: pulse 82; temperature 99.8°; respiration 22, with guarding of the right abdomen. The right leg was partially abducted. The fundus was 17 cm. above the symphysis. The right cornu was slightly above the fundus and difficult to outline because of muscular guarding of the entire right rectus muscle. The tongue was clouded. On auscultation, fetal heart tones were difficult to obtain but fetal movements were noted. The laboratory findings were: urine, albumin and sugar negative; hemoglobin count 84%; WBC: 18,000.

The presumptive diagnosis of twisted adnexal mass was made on the basis of history, sudden onset, and continuation of pain. The patient was prepared for immediate surgery.

OPERATION

The abdomen was entered through a right upper transverse incision, cutting the rectus muscle. A fist-size, blackish-blue, cystic mass belonging to the right ovary was found. An elongated, enlarged right tube was wrapped around the cystic mass, with the pedicle, consisting of infundibulopelvic ligament, ovarian ligament and medial portion of the tube, twisted over 360° counterclockwise with complete obliteration of the blood supply. A right salpingo-oophorectomy was performed. The appendix, which was slightly reddened, was removed by the usual technique. Care was taken that the uterus was not irritated by pushing, suturing or packing.

The patient withstood the operation very well. The postoperative course was uneventful. She was not placed on progesterone.

PATHOLOGY

The ovarian tumor consisted of a gangrenous dermoid cyst, including hair and sebaceous masses.

Postoperative followup: The further prenatal course of this patient was uneventful and on June 10 she delivered at term, a full term living male infant of 7 lbs. 11 oz.

* From the Department of Obstetrics and Gynecology, The University of Maryland School of Medicine.

by low forceps under saddle block. The mother and baby were discharged in good condition.

DISCUSSION

Acute abdominal emergencies during pregnancy have to be operated on immediately regardless of what stage of pregnancy they occur. A twisted ovarian cyst as the one described, constitutes an emergency comparable to an acute appendicitis or an incarcerated hernia.

If one finds a freely movable ovarian mass in a nonpregnant patient, it should be removed even if asymptomatic because of the possibility of twisting or the possibility of being malignant. If such a cystic ovarian tumor is associated with pregnancy, the procedure is somewhat different. As long as the tumor is freely mobile, then surgical intervention should be delayed until at least after the fourth month. Operation before the fourth month most likely will be followed by subsequent abortion. Ovarian masses should be removed, therefore, before the fourth month only, if they are incarcerated in the small pelvis, together with a pregnant uterus. After the fourth month, most of the ovarian tumors are lifted out of the small pelvis, together with the growing uterus and they very often cannot be felt or found or are hidden in the flanks or behind the uterus. Many of the ovarian tumors are not even found after labor. A freely mobile ovarian cyst during labor, high up in the abdomen, usually does not cause any trouble. Only if such a tumor is bound down in the small pelvis (tumor previa) are obstetric difficulties to be expected. Some of the ovarian cysts during labor can be carefully pushed upwards under deep anesthesia and the presenting part subsequently descends into the pelvis and vaginal delivery can be accomplished. If the tumor is fixed, aspiration of the contents of the cyst is sometimes possible, allowing subsequent vaginal delivery. However, abdominal delivery would be preferable in such a case with subsequent removal of the ovarian cyst. Frequently, ovarian cysts are bound down in the small pelvis and are adherent to the rectum and secondarily infected.

Any ovarian tumor approximately 8-10 cm. in diameter or more, which is freely mobile or very firm on palpation, can be easily removed the first 24 hours postpartum. In the case described, circular movement of the abdomen when sweeping the porch had evidently caused the ovarian cyst to twist. The consequence was gangrene of the dermoid. Postoperative prophylactic therapy with progesterone or relaxine may be beneficial but is still disputable. It is more important not to mishandle the pregnant uterus during surgery and to avoid any pushing, packing or massaging. Immediate intervention, careful conservative observation in the postoperative period are the essentials to keep the intrauterine pregnancy undisturbed.

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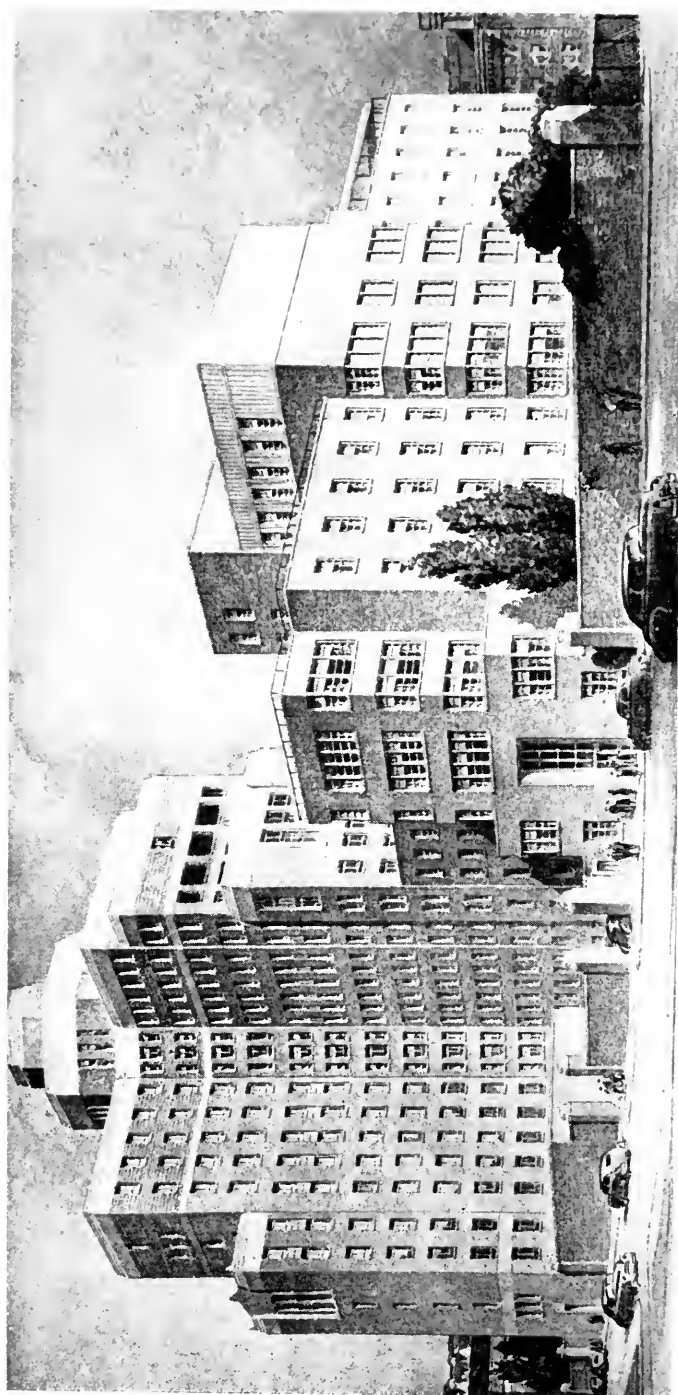
NUMBER 5

FOREWORD

The report which follows, for this School of Medicine is a first. It is, in effect, a summary by departments, covering the initial phases of a broad and continuing plan of development begun several years ago and which is now beginning to assume the appearance of a result tangible enough to be spread on the printed page.

The report covers various phases of medical teaching and research developments. It carries announcements of appointments of many new faculty members who will be playing an increasing role in the progress of things in the years before us. Thus, the School of Medicine believes this time propitious to record such achievements as might be realized and to announce more formally its unified and detailed plans for the future.

This annual report, which will become a continuing year-end number of the Bulletin, will present in some detail a summary of the activities of the School as a whole (Report of the Dean) and of individual departments, reflecting their organizational activities, plans and achievements. It will serve as a continuing and cumulative record of achievement and also as a challenge for continued improvement.



University Hospital Showing the Psychiatric Institute in the Foreground

REPORT OF THE DEAN

It has been said that we live in a competitive world. This truism is well recognized, but its extent is sometimes not appreciated. From the health viewpoint, from conception to the grave, man's very existence is being challenged by a host of living and environmental things, many of which he is seldom aware. These conflicts, whether won or lost, materially affect his sense of well-being and his physical and mental ability to perform tasks that he deems essential.

In the United States during the past year the total expenditures for health services, both governmental and private, approximated seventeen billion dollars, including all forms of professional fees, hospital charges, nursing, drugs, appliances and other related items. It is worthy of note, however, that the amount spent on medical education itself, the most essential aspect of this whole program, was less than $\frac{3}{4}$ of one per cent of the total.

The keystone in the arch of adequate health services is the physician. There is no substitute for him and the only source of supply is the medical schools. Hence, medical education must be the concern of every segment of our society. At the University of Maryland we have followed very closely the guiding principles of the Association of the American Medical College, namely;

"Medical education includes not only premedical preparation but also the subsequent continuance of the educational process throughout the internship, hospital residency, specialty training, and the continuation education of physicians in practice. All features of the entire program must contribute also to the obligation of physicians to participate in the preparation, supervision, and guidance of the army of nursing, dental, public health, and technical workers and lay employees of health institutions and organizations as well as in the education of the public in health matters. The medical schools occupy the central position in the guidance and development of adequate health services of every kind and description for the entire population. It is a heavy responsibility.

"The supply of doctors is under constant discussion. Attention may be called to the fact that 7,463 physicians were added to the profession during the calendar year 1956 and 3,659 deaths were reported—a net increase of 3,804 doctors in the United States. It is vitally important to the future of the country that the recruitment and education of well-qualified students and physicians be maintained in order to insure adequate numbers for the future.

"THE MEDICAL SCHOOL

The medical school is always greater than the total of its parts. Its existence is justified to the extent that it maintains excellence in performance—education, research, hospital responsibilities, and public service. The primary function of medical education is to create an environment in which well-qualified students may acquire the knowledge, habits of study, basic skills, sound attitudes, sense of personal responsibility for patients, and an understanding of the professional, community, and the ethical principles that motivate the true physician. Many of the features of practice, science, and community service cannot themselves be taught—they have to be learned under the guidance of a competent and enthusiastic faculty.

"CHANGES IN MEDICAL EDUCATION

The rapidly moving developments are reflected in a changing philosophy of medical education. The new attitude is to regard it as a graduate discipline requiring integration of the entire learning process. The whole undergraduate medical course must be looked upon as a unit, not as a series of independent and more or less watertight compartments. This is a characteristic that distinguishes medical instruction from most other divisions of the university. The objective of the medical course is to produce upon graduation neither a specialist nor a physician who can render every type of professional care but rather one who, after an internship, is prepared to begin practice as a well-rounded, competent, safe, and conscientious family physician or to go forward into advanced work in a limited field.

"Another feature of our present-day educational plan is to select self-starting, self-directing, and self-propelling students who have a broad cultural background rather than a concentration in the sciences and who, under the guidance and supervision of skilled teachers, may secure the elements of a real education which, at the professional level, must always be largely self-education. In the instruction itself the emphasis is placed increasingly on the longitudinal nature of disease and the changes that occur in the individual throughout his entire life span rather than on the occasional acute illness or episode of disability.

"NEW PLANS AND METHODS

Importance is increasingly being placed in the evaluation of the student upon his ability to think for himself; to demonstrate initiative, imagination, intellectual curiosity, scientific critique, and resourcefulness; to face alternatives and to make decisions; and to develop understanding of diseases and of people rather than knowledge of them alone. The reliance is being placed upon performance, judgment, discrimination, and intellectual self-reliance which reveal the intangibles and imponderables that mark the true physician.

"While it is highly important that the purely intellectual talents of the student should be developed to the fullest, it is also vital that the qualities of temperament, human sympathy, and insight which are required for dealing with the manifold human problems of medical care should be emphasized. The physician needs an understanding of, and must be able to treat, the man as well as the disease. Probably no field of endeavor comes closer to the everyday problems of humanity than medicine."*

The University of Maryland, School of Medicine has followed very closely the ideology stated in the above paragraphs, and its medical educational program is a challenge to the faculty and, we hope, stimulating to the student.

During the past year, the cost of medical education increased in keeping with generally rising costs. The average for all the medical schools in the United States, as compared with resources provided at the University of Maryland, School of Medicine are as presented in the following table:

*From the Final Report of the AAMC Commission on Medical Education (1932).

NATIONAL AVERAGES AND THE TEACHING BUDGET, UNIVERSITY OF MARYLAND
1956

[illegible]

Note: Figures obtained from information furnished by the National Fund for Medical Education

In reviewing the happenings in the medical school of the 1956-57 school year, probably the most significant event was the continuing organization of a strong faculty and an improvement in teaching in practically all departments. Through efforts of the faculty in securing grants-in-aid, as well as maximum use of the resources in the medical school and University Hospital, a great deal of new equipment and better research and teaching space have been provided. The diagnostic and research laboratories continue to be overtaxed and there is a great need for additional facilities if we are to give a high quality of patient care and provide adequate opportunities for research. In the clinical teaching in in-patient areas, we have continued to have very inadequate representation of the medical specialties, which greatly weakens our teaching at both undergraduate and graduate levels. In the progress that has been made, the Medical School is very fortunate in that it has enjoyed the support and understanding of its problems by President Elkins and his staff and the Board of Regents of the University.

As a mark of its maturity and growth, the Medical School continued its daily tasks of teaching, research, and patient care duly mindful of the future by making important changes and revision of its faculty Bylaws, the introduction of an Honor System by its student body and the opening of a new school of Physical Therapy. The format of its catalogue was changed and its courses of instruction developed in keeping with graduate education.

Plant Improvement

A committee comprised of the Deans of the various professional schools has worked with the President's Office in drawing up the general requirements recommended for future development of the professional schools on the Baltimore campus. On June 18, 1957 this plan was approved by the Board of Regents as a ten year objective of the Baltimore schools that would be sought from the State. The current year saw the initiation of construction through a Hill-Burton project involving the Radiology Department in University Hospital. The development of the obstetrics-gynecology service on the 6th floor of University Hospital with new delivery room, nursery and premature nursery, the conversion of the old obstetrics delivery rooms on the 7th floor of University Hospital to operating rooms with movement of central sterile supply to the 8th floor and the creation of recovery rooms in the area in the A wing of the 7th floor. In addition, the food service facilities and cafeteria were revised in a major way. The E.E.G. clinic has been completely remodeled in the University Hospital and a sound-proof room provided for Otolaryngology with the help of the Woman's Auxiliary Board. Through the efforts of Dr. Harry M. Robinson, Jr., the Dermatology Clinic has been remodeled, making it possible to not only conduct the clinic in a better manner, but resources have been made available for better dermatologic research. Generous gifts from the Filbert Foundation and the Woman's Auxiliary of University Hospital made it possible to install a Cobalt 60 radiation therapy unit for the treatment of cancer.

In the medical school proper, the clinical pathology area and contagious areas of the 5th floor Bressler Building have been converted into much needed research space and a new small animal room was started on the 4th floor of the Gray Building. In addition, major changes were made in the Bressler 6th floor surgical research laboratories. Clinical Pathology, Pathology and Microbiology laboratories were combined and the pathology

laboratories changed in a major way to allow better teaching, research and diagnostic work. The autopsy room was revised and air conditioned. Through the generous help of the School of Nursing, Bressler 2 lecture room was air conditioned. A steel stair was installed connecting the 4th floors of the Bressler and Gray Buildings giving better access to the small animal facilities.

The Medical School received generous grants-in-aid from the United States Public Health Service to provide an Ultra Centrifuge plus accessories and an electron microscope. These instruments are now installed in the Bressler Building where they are used by most of the basic science departments. The Dean's Office in the old Medical Building has been renovated and restored to lines in keeping with the interior of the old building. Pending construction of the new Library of the University, the University moved the old library from Davidge Hall to 8 South Greene Street. Davidge Hall has been razed and two new pieces of property have been acquired to enlarge the site. The construction of the new library is expected to take place in the Fall of 1957. A delay in the construction of the Union Building is being experienced because the bids received have exceeded the money available for its construction.

Faculty

A number of new faculty appointments have been made in filling key positions. Dr. Harlan I. Firminger has been named to succeed Dr. Hugh R. Spencer in Pathology and Dr. Cyrus L. Blanchard has been named Chief of Otolaryngology. Dr. Firminger joins the faculty having previously been Professor of Pathology at the University of Kansas Medical School. He trained primarily at the Malarly Institute in Boston with work also at Washington University Medical School in St. Louis and at the National Cancer Institute at Bethesda. Dr. Blanchard had his primary graduate training at the University of Michigan and at the University of California in Los Angeles. He is particularly well qualified in the areas of hearing and speech. Dr. Eugene Brody has replaced Dr. Maurice Greenhill as Professor of Psychiatry under Dr. Finesinger. Dr. Brody was Assistant Professor of Psychiatry at Yale Medical School in New Haven, Conn. prior to coming to Maryland.

A series of social functions were held during the Spring in honor of Dr. Maurice C. Pincoffs, who retired because of age on June 30, 1957. Dr. Pincoffs will remain with the medical school and will continue to serve on a part-time basis as a senior advisor and teacher in medicine and preventive medicine and rehabilitation. An interested group of faculty and alumni have headed a campaign to raise funds to establish a Maurice C. Pincoffs Fellowship in Medicine and an annual lectureship.

Meetings

During the year, a generous number of faculty participated in all the important national, scientific and professional meetings. Many of them contributed important papers to the programs. We were honored by the American Association of Anatomists in that they chose the University of Maryland Medical School for their annual meeting.

During the year, a number of meetings and dinners were held marking the sesquicentennial of the medical school, starting with the Founders Day Banquet on June 19, 1957 and climaxed by precommencement ceremonies on the grounds of University

Hospital on June 8th. Dr. Alan Chesney gave the precommencement address on the role of the University of Maryland faculty in the founding of the Johns Hopkins Medical School.

A tea was given on December 18th in the old Medical School Building in honor of the passing by the legislature at Annapolis of the original act founding the Medical School. Friends in the State government and in the University joined with us in tribute to this memorable event.

Teaching and Curriculum

The Faculty Board of the School of Medicine, upon recommendation of the Curriculum Committee, decided to extend the school year from 32 to 36 weeks. This increase in time was needed primarily to provide for elective time for the students and to give a more thorough coverage of such subjects as physical diagnosis. With the amount of information now available, it is impossible to thoroughly cover all subjects in the curriculum and ways and means must be found to stimulate continuing study by the student of the medical sciences and related fields of knowledge.

The problem of adequate coverage of the areas of knowledge involved in the curriculum is further compounded with difficulty by the fact that University Hospital has only 600 beds available for teaching and most of the clinical specialties cannot be basically taught from its clinical services and clinics. Although the school hours are from 8:00 A.M. to 5:00 P.M. five days a week and until 12:30 P.M. on Saturdays, we find great difficulty in arranging student schedules to cover the necessary clinical teaching areas. To carry out our present program, we find it necessary to teach, not only in University Hospital, but Baltimore City Hospitals, Mercy Hospital, Mount Wilson State Tuberculosis Hospital, Baltimore Eye and Ear Hospital, Kernans Hospital, Spring Grove and Springfield State Mental Hospitals, Fort Howard Veterans Administration Hospital and South Baltimore General Hospital. A great amount of student time is spent traveling to the various hospitals and it is difficult to provide adequate faculty supervision and teaching in so many widely scattered locations.

ORGANIZATION OF THE CURRICULUM

The curriculum is organized under fifteen departments.

1. Anatomy (including Histology, Embryology, and Neuro-anatomy).
2. Anesthesiology.
3. Biological Chemistry.
4. Medicine (including Medical Specialties).
5. Microbiology.
6. Obstetrics and Gynecology.
7. Ophthalmology.
8. Pathology.
9. Pediatrics.
10. Pharmacology.
11. Physiology.

12. Preventive Medicine and Rehabilitation.
13. Psychiatry.
14. Radiology.
15. Surgery (including Surgical Specialties).

The instruction is given in four academic years of graded work.

Several courses of study extend through two years or more, but in no case are the students of different years thrown together in the same course of teaching.

During the 1956-57 academic year, the first and second year curriculum was devoted principally to the study of the structures, functions, chemistry, pathology and pathogenic agents involved in the human body. This instruction was supplemented by an interdepartmental course entitled, "Man and his Environment". This course was directed toward an exploration of the sociologic, psychologic, physiologic and geneologic relationship of man and his surroundings. Outstanding national and international figures in the areas of science involved in the course were used as speakers and seminar moderators.

Some introductory instruction in medicine, surgery and psychiatry is given in the second year. Laboratory work occupies most of the student's time during these two years.

The third and fourth years are almost entirely clinical, but correlative medicine plays an important part in all instruction. During 1956-57 four weeks of additional instruction was given in the third year, thus providing more time for small group teaching, intimate contact with patients and correlative clinical and basic science conferences. A special feature of the instruction in the school is the attempt to bring together teacher and student in close personal relationship of a graduate teaching type in which the student is expected to expend a major effort in bringing about his own education and follow his thinking in the understanding of life and disease processes. In many courses of instruction, the classes are divided into small groups and a large number of instructors insures attention to the requirements of each student. Major curricular changes in the fourth year include free time for electives and the addition of the National Board Part II comprehensive examination to the criteria used for determining eligibility for graduation.

In most courses the final examination is not the sole test of proficiency, and the students final grade is determined largely by recitations, completion of assigned work and interim examinations given throughout the course.

The basic science departments are actively engaged in graduate education with a number of candidates for Ph.D. degrees. In addition, arrangements have been made for medical undergraduates to drop out one or two years and complete requirements for advanced degrees prior to completing their work for a M.D. In the areas of specialty training for graduates, the University Hospital is approved for surgery, neuro-surgery, orthopedic surgery, g. u. surgery, otolaryngology and chest surgery, internal medicine with subspecialties in cardiology, neurology and gastro-enterology, pediatrics, obstetrics and gynecology, radiology, diagnostic and radiation therapy anesthesiology, pathology and clinical pathology, psychiatry and clinical psychology.

The postgraduate program is aimed at public education in health matters and in bringing latest developments and necessary reviews to practitioners in the State. Short

courses, seminars, special lectures and conferences are provided for County Medical Societies and hospitals within the State.

Research and Studies to Improve Medical Education:

During the year ending June 30, 1957, the School of Medicine obtained from sources other than its State budget gifts and grants in support of research and studies for the improvement of medical education in the amount of \$1,485,728.00. The year ending June 30, 1954 the amount received for these purposes was \$530,162.00. Over the three years lapsing since 1954 research and studies for the improvement of medical education have increased dollar wise 280%—almost a three-fold increase in three years.

The interest to improve individual accomplishment in amount and quality is present in every department of the medical school, in addition a concerted effort is being extended by all to carry out research aimed at increasing medical and other scientific knowledge as it affects health. Although greatly handicapped by lack of space and many times by equipment, medical research is blossoming in every department and maximum use is being made of all the resources available. The tradition and spirit of the school today follows closely the footsteps of one of its graduates, James Carrol, who as a member of the United States Army Commission succeeded in demonstrating the mode of transmission of yellow fever. He became an eminent contributor to science by his investigations and a heroic benefactor of his country and mankind.

WILLIAM S. STONE, *Dean.*

BASIC SCIENCE DEPARTMENTS

DEPARTMENT OF ANATOMY

STAFF

FRANK H. J. FIGGE, A.B., Ph.D., *Professor of Anatomy & Head of the Department*
EDUARD UHLENHUTH, Ph.D., *Research Professor of Anatomy*
OTTO C. BRANTIGAN, B.S., M.D., *Professor of Clinical Anatomy*
WALLE J. H. NAUTA, M.D., Ph.D., (PT), *Professor of Anatomy*
VERNON E. KRAHL, B.S., Ph.D., *Associate Professor of Anatomy*
HARRY PATTERSON MACK, M.D., *Associate Professor of Anatomy*
WILLIAM WALLACE WALKER, B.S., M.D., (PT), *Associate Professor of Clinical Anatomy*
HENRICUS G. J. M. KUYPERS, M.D., Ph.D., *Assistant Professor of Anatomy*
THEODORE F. LEVEQUE, B.A., M.S., Ph.D., *Assistant Professor of Anatomy*
KARL FREDERICK MECH, B.S., M.D., (PT), *Assistant Professor of Anatomy*
WILLIAM BOOTH SETTLE, A.B., M.D., (PT), *Assistant Professor of Clinical Anatomy*
HARRY C. BOWIE, B.S., M.D., (PT), *Associate in Clinical Anatomy*
ROSS Z. PIERPONT, B.S., M.D., (PT), *Associate in Clinical Anatomy*
HERBERT E. REIFSCHEIDER, A.B., M.D., (PT), *Associate in Clinical Anatomy*
ROBERT EUGENE McCAFFERTY, B.S., M.S., Ph.D., *Instructor in Anatomy*
ELWYN A. SAUNDERS, B.S., M.S., M.D., *Instructor in Anatomy*
WILLIAM A. HOLBROOK, B.S., M.D., (PT), *Assistant in Anatomy*
HENRY E. LANGENFELDER, B.A., M.D., (PT), *Assistant in Anatomy*
ROBERT A. MOORE, JR., B.S., M.D., (PT), *Assistant in Anatomy*

GENERAL POLICIES AND ORGANIZATION

In accordance with the bylaws and constitution of the Medical School, the specific goals of the anatomy department during 1956-1957 have been:

1. To teach all branches of anatomy; gross, microscopic, neuro, developmental and clinical, to medical and graduate students.
2. To carry on research to advance anatomic and general medical knowledge and to collaborate with other departments engaged in similar efforts.
3. To foster and plan graduate work and, by selecting and encouraging the best students to engage in research, assist in the development of medical educators in anatomic and other fields.
4. To cooperate with all public health agencies and health organizations to disseminate knowledge that has as its goal the improvement of the health of the people of the state and nation.

ORGANIZATION OF COURSES AND TEACHING STAFF

Anatomy was taught as an integrated course with the needs of the medical student having primary consideration. The teaching staff was divided into four groups or divisions as follows:

1. Gross Anatomy
2. Micro Anatomy and Embryology
3. Neuro Anatomy
4. Clinical Anatomy

Since our primary obligation is teaching, this activity will be described first.

TEACHING ACTIVITIES 1956-1957

GROSS ANATOMY

In the division of Gross Anatomy, a dissecting manual was written in the attempt to design a schedule of dissections that could be accomplished in the 256 hours that was available for this course. This proved to be a far greater task than had been anticipated and occupied a major portion of the time of the head of the department from June until December. Doctors Krah1 and Saunders and others also contributed considerable time in proofreading and correcting this manuscript. Approximately 500 copies were printed by the Art Department. This manual will be used again next year and after further correction and revision may be published if it proves satisfactory.

In Gross Anatomy Doctors Figge, Krah1, Mech, McCafferty, and Saunders had major responsibilities. Dr. Langenfelder and Mr. McDonald had minor responsibilities. Six members of the staff were present in the laboratory at all times. The major part of this course consisted in dissection of the human body according to a definite plan. This was accompanied by demonstration of dissected preparations and other materials. Television demonstrations were used whenever this appeared advantageous.

MICRO-ANATOMY

In the 144 hour course in Micro-anatomy Doctors Mack, Leveque, and Figge had major responsibilities while Doctors Krah1, Kuypers, McCafferty, and Mr. Davidheiser had minor responsibilities. The subject matter in this course was correlated as closely as possible with the material in Gross Anatomy. Special emphasis was placed on the dynamic and functional aspects. Audio-visual aids of all types were abundantly used in this course.

NEURO-ANATOMY

In the course in Neuro-anatomy, which extended over a period of 96 hours, Doctors Nauta and Kuypers had major responsibilities. Doctors Figge, Moore, Mack, and Mr. McDonald had minor responsibilities. This course covered both the gross and microscopic anatomy of the central nervous system and was integrated as closely as possible with gross and micro-anatomy.

CLINICAL ANATOMY

The course in Clinical Anatomy was given over a period of 96 hours in the second semester of the sophomore year. This course is designed to bridge the gap between the

basic anatomy and clinical anatomy as applied to the study and practice of medicine and surgery. It also affords the student a review of anatomy at the end of the second year just before the National Board Examinations. A prosection-guided dissection was carried out during the course. Dr. Brantigan and Dr. Walker had major responsibilities; Doctors Settle, Reifschneider, Bowie, and Pierpont, and Mr. McDonald had minor responsibilities in this course.

COOPERATION OF OTHER DEPARTMENTS

In carrying out the teaching program it was desirable, and feasible, to present some of the material in cooperation with appropriate clinical departments (Surgery, Roentgenology, Pediatrics, Neurology, and Neuro-Surgery). Consequently, in addition to the members of the anatomy staff that teach anatomy, there are numerous instances where members of other departments participated in the teaching of anatomy. Some of the more important areas where this was possible will be mentioned.

1. In the field of roentgenology eight illustrated lectures were given by Dr. Boudreau, a member of the Department of Roentgenology. These were followed by demonstrations throughout the week of roentgenographs appropriate to the lecture and the parts of the body being studied. These films were arranged on sixteen view boxes in the Department of Anatomy by Dr. Boudreau. Appropriate structures to be identified by the student were marked by arrows. Later the correct answers were supplied so that students could gauge their progress and proficiency in this field.
2. The Department of Neurology and Neuro-Surgery participated in teaching a course in Neuro Anatomy.
3. The course in Clinical Anatomy was taught almost entirely by practicing surgeons, some of whom are members of the Department of Surgery.

TEACHING IN OTHER DEPARTMENTS BY MEMBERS OF THE ANATOMY STAFF

1. The anatomy staff takes an active interest in the Saturday morning course "Man and His Environment" and assumes some responsibility for this course.
2. Dr. Krahle gave several lectures on the anatomy of the pelvis in the course in obstetrics and gynecology.
3. Dr. Kuypers gave special instruction to groups of students and staff in the Department of Radiology on the anatomy of the central nervous system.
4. Special lectures on the metabolism of porphyrins were given to the seminar groups in the Department of Medicine. (Frank H. J. Figge)
5. This year, for the first time, we participated in teaching oncology to the sophomore students in pathology. This was primarily a special laboratory section on experimental cancer research. The department also furnished space and anatomic material for the teaching of anatomy to students in physiotherapy. (Frank H. J. Figge)

GRADUATE AND POST-GRADUATE INSTRUCTION

The Department of Anatomy teaches a small number of graduate students majoring in other basic science subjects in the Medical School. In addition, we have three graduate students majoring in anatomy. Approximately ten post-graduate students took

the course in anatomy for post graduate students. This latter course is given in connection with Clinical Anatomy.

OPERATION OF THE ANATOMY BOARD OF MARYLAND

In connection with the teaching of anatomy one of the major fields of activity involves the procurement of good anatomic material for teaching. The Anatomy Board of Maryland was established to legalize the procurement of such material to be distributed to the medical and dental schools of the state. However, the actual work involved in collecting and dispensing such material falls largely on the staff of the Department of Anatomy of the University of Maryland. It is necessary to maintain continuous contact with hospitals and nursing homes throughout the state. During the past year we have tested a twenty-four hour answering service to establish whether this would improve the efficiency of the Anatomy Board. This has not proved worthwhile and will probably be abandoned. The factor which contributes most to the successful collection of anatomic material appears to be the establishment of good relations with the health authorities, the hospitals, and the nursing homes. We have been able to elicit such a fine spirit of cooperation with these groups throughout the state that we have a very adequate amount of anatomic material and are thus able to supply cadavers to the dental school, the freshman and sophomore medical students, physiotherapy students, and a small amount of material for some of the clinical departments in this and other hospitals. While this activity takes a considerable amount of effort on the part of members of this department (chiefly Doctors Figge and Krah), the situation in this school with regard to cadaver material is very good and perhaps far better than any other medical school in this country.

In addition to collecting cadaver material considerable amount of time is spent in preparing some of this anatomic material for the use of students. The student bone loan collection must be continually added to for maintenance and improvement. Likewise many preparations of great teaching value are prepared for our anatomic museum of which we are very proud. This was recently reorganized and refurbished for display at the meeting of the American Association of Anatomists. (Dr. Saunders, Mr. Carl Mueller)

RESEARCH ACTIVITIES AND ATTENDANCE AT SCIENTIFIC MEETINGS

The research activities of the department vary so greatly that this item will be discussed according to the individual members of the department.

Research Activities of Frank H. J. Figge, Chairman of the Department and H. Patterson Mack, Associate Professor

Since both of us are interested in the cancer problem and collaborate so extensively, it would be difficult to describe our research activities separately. As our work has progressed, we have come to recognize the fact that cancer is probably one of the constitutional diseases. It has thus been necessary to broaden our program to include constitutional diseases and study maladjusted or imbalanced states that bear a relationship not only to cancer, but also diabetes, obesity, cardio-vascular, and other diseases. In carrying out these investigations we operate a relatively large mouse colony (8,000

mice). The work is also extended to the clinical field through the efforts of Dr. Mack. During the past year the following subjects have received our attention.

1. *Use of Porphyrins in Cancer Therapy.*

There are two possible ways that the porphyrins may be used to improve the present methods of treatment of cancer. Because this material localizes in cancer tissue, and in lymph nodes, an attempt has been made to use this for the improvement of surgical therapy. In this case it is injected preoperatively and its fluorescent characteristics are used to assist the surgeon in determining the limits of the malignant tissue and also to locate nearby lymph nodes. While it has some promise in this field, the necessity for darkening the operating room and the elaborate equipment and preparations necessary have curtailed the use of this method. The second method of using porphyrin depends on its ability to alter the radiation sensitivity of any cell. This method is being used here in this institution and even more extensively elsewhere. Some remarkable early effects have been observed. Dr. Mack has submitted a comprehensive paper on this subject which will appear in the journal "Cancer" in the near future.

2. *The Studies on the Influence of Adiposity on Cancer Susceptibility.*

It is well known that people who are overweight are more susceptible to cancer and many other diseases than are thin people. We have developed a strain of naturally obese mice in order to study these problems. The mice have been inbred for over thirty generations. They exhibit a high incidence of obesity, but some of the mice in this strain are also normal weight and some actually thin. By hybridizing these mice with strains that carry factors for various types of cancer, such as mammary cancer and leukemia, we are able to introduce such cancer factors into the hybrid mice, which may then be classified as fat, medium, and thin for the purpose of studying the influence of weight on the cancer-producing factors. Since we had at hand a mouse exhibiting a high incidence of both mammary cancer and leukemia, we have used this strain to introduce these two types of cancer. The results are being recorded and tabulated. It is estimated that this experiment will require about another year to be completed.

3. *Studies of the Blood Sera of Mice of a High Leukemic Strain.*

In this laboratory the C_3H strain of mice developed a high incidence of leukemia, which was superimposed on a high incidence of mammary cancer. The females of this strain now exhibit a 100 per cent incidence of cancer. Approximately 55 per cent of the females developed mammary cancer and 55 per cent developed leukemia. This means that 10 per cent of the animals developed both. This strain has been given the sub-strain designation, $C_3H_{F_{15}}$, by Dr. Law. In studying the blood sera of the mice of the $C_3H_{F_{15}}$ and other strains, Dr. Andersch observed that there is a lower gamma globulin level in the sera of the $C_3H_{F_{15}}$ than in the sera of mice of several other strains. The remarkable observation, however, was that the gamma globulin and alpha globulin of the leukemic mice were lower than the correspond-

ing fractions in the sera of the non-leukemic mice of the C_3H_{Fg} strain. These results are of interest in the light of previous and present work on the influence of hematoporphyrin and sunlight on gamma globulin which was described by Dr. George Peck (unpublished).

4. *Liver Cancer, and Obesity.*

The mice of the fat mouse group are also being used to study the susceptibility to cancer of the liver and pancreas and for longevity studies. We have the impression that many of the mice of this strain develop diabetes insipidus late in life, and this aspect of the problem is being studied in collaboration with Dr. Leveque. It is felt that there may be degenerative changes in the hypothalamus of these animals that involve the production and release of an anti-diuretic hormone by the neuro-secretory element of the hypothalamus.

PUBLICATIONS

Papers Submitted for Publication

FIGGE, FRANK H. J.; DAVIDHEISER, ROGER H.: Comparative studies on porphyrin-synthesizing enzymes of harderian glands of mice of various strains. Submitted to Proceedings of the Society for Experimental Biology and Medicine.

Papers Accepted for Publication

MACK, H. PATTERSON; DIEHL, WM. K.; PECK, GEORGE C.; FIGGE, FRANK H. J.: Evaluation of the combined effects of hematoporphyrin and radiation I. Treatment of carcinoma of the cervix. Accepted in Cancer.

Papers Published

PECK, GEORGE C.; MACK, H. PATTERSON; HOLBROOK, WILLIAM A.; FIGGE, FRANK H. J.: Use of hematoporphyrin fluorescence in biliary and cancer surgery. The American Surgeon, 21.

FIGGE, FRANK H. J.; MACK, H. PATTERSON; PECK, GEORGE C. and HOLBROOK, WILLIAM: Use of red-fluorescent porphyrins to delineate normal and abnormal anatomical structures and neoplastic tissues in human subjects. The Anatomical Record. 121.

DAVIDHEISER, ROGER H. and FIGGE, FRANK H. J.: Enzymatic porphyrin synthesis in harderian glands and other organs and tissues of mice. Proceedings of the Society for Experimental Biology and Medicine.

FIGGE, FRANK H. J.; DIEHL, W. K.; PECK, GEORGE C. and MACK, H. PATTERSON: Evaluation of the use of intravenous hematoporphyrin injections to improve surgical and radiation therapy of cancer in human subjects. Proceedings of the American Association for Cancer Research, 2.

FIGGE, FRANK H. J. and WICHTERMAN, RALPH: Influence of hematoporphyrin and phenol on x-radiation sensitivity of paramecium. Biological Bulletin, III.

SOLOMON, HARVEY M. and FIGGE, FRANK H. J.: Differential concentration of porphyrin in various divisions of the central nervous system. Proceedings of the Society for Experimental Biology and Medicine.

FIGGE, FRANK H. J.: Cigarette smoke and cancer. Medical Science, 1.

Research Activities of Dr. Eduard Uhlenhuth, Research Professor of Anatomy

Dr. Uhlenhuth is interested in depicting the anatomy of the pelvis in a more precise way than has ever been accomplished before. His work involves the careful dissection of the fascia and other structure of the pelvis so that they may be accurately illustrated by an artist. He has published a book entitled "The Anatomy of the Pelvis", which is

widely recognized and acclaimed by gynecologists in this and other countries. Another more complete book is being prepared on this same subject. This, as well as the one which preceded it, will probably become classics in this field. In addition, Dr. Uhlenhuth has published the following papers during this year.

1. A paper which lists the old books and classics of anatomic literature which he collected during the time that he was chairman of the department. "The Collection of Classics of the Anatomic Literature in the Library of the Department of Anatomy". Bulletin of the School of Medicine, University of Maryland. This collection also was presented as a demonstration in the symposium on the History of Anatomy at the 70th meeting of the American Association of Anatomists held here in April.
2. In collaboration with Dr. Gladys E. Wadsworth he has published a paper entitled "The Pelvic Urethra in the Male and Female" in the Journal of Urology.
3. "Vaginal Fascia, A Myth?" by Eduard Uhlenhuth and Gretchen Wood Nolley. Submitted to Obstetrics and Gynecology to appear in the October issue as the lead article.

*Research Activities of Walle J. H. Nauta, Professor of Anatomy, and
Henricus G. J. M. Kuypers, Assistant Professor of Anatomy*

Doctors Nauta and Kuypers also collaborate extensively in their investigations on the morphology and function of the central nervous system. Their investigation involves chiefly the production or study of the result of lesions in the central nervous system by means of a method developed by Nauta and Gyax, which depicts degenerative changes in unmyelinated and lightly myelinated nerve fibers. Dr. Nauta was invited to present his work at the International Symposium on the Reticular Formation held in Detroit. At this meeting he and Dr. Kuypers were co-authors on a paper entitled "The Anatomy of the Ascending Fiber Systems in the Reticular Formation". They both presented their work also at the meeting of the Cajal Club, which met here at the University in April. The complete list of publications of Dr. Nauta is not available at this time. Dr. Kuypers has an independent interest in the analysis of the cortico bulbar connections and the phylogenetic trends in this part of the nervous system. His activity in this field is expressed by the following papers accepted and submitted for publication.

1. "The Anatomical Analysis of Cortico Bulbar Connections in the Cat". Accepted and published in the Journal of Anatomy.
2. "Cortico Bulbar Connections in Man". An anatomical study submitted to Brain.
3. Dr. Kuypers attended the 1st International Congress of Neurological Science held in Belgium. Here he presented a paper in the session on extra-pyramidal pathology entitled "Phylogenetic Trends and Representation of Motor Mechanisms in the Cerebral Cortex". He also presented an exhibit at the International Neurological Congress on the "Nauta-Gyax Selective Silver Impregnation Method for Degenerating Nerve Fibers Applied to Human Material".

Research Activities of Vernon E. Krah1, Associate Professor of Anatomy

In addition to considerable responsibility in the teaching program in gross anatomy, histology, and embryology, and obstetrics and gynecology, Dr. Krah1 is active in a research program which involves the investigation of the finer structure of the mammalian lung. The specific problems being investigated at this time are:

1. The Development and Arrangement of Elastic Fibers in the Lungs of Man and Lower Mammals; their Changes with Age—Possible Relationships to the Problem of the Etiology of Pulmonary Emphysema.
2. Study of a recently discovered bronchiole-alveolar communication in the lungs of man and lower mammals—a comparative anatomic study. The novelty of such a finding and the practical use of the knowledge of such pathways of collateral aeration warrants further study.

3. Construction of apparatus, adapted for lungs of various size for the inflation of lungs under subatmospheric pressure with fixatives, heparinized blood plasma, etc.

Dr. Krah1 presented some of the results of his investigations at the 6th International Congress of Otolaryngology here in Baltimore, May 1957. Dr. Krah1 has also published numerous book reviews in the Journal of American Dental Association and the Annals of Internal Medicine.

Research Activities of Theodore F. Leveque, Assistant Professor of Anatomy

Dr. Leveque is profoundly interested in investigation of the neuro-secretory process in the nerve cells of the hypothalamus. He has been here just long enough to initiate experiments in this field which are under-going analysis at present. Last spring he was invited to discuss papers at the symposium on the diencephalon at a meeting held in Milan, Italy.

Research Activities of Robert E. McCafferty, Instructor in Anatomy

Dr. McCafferty is interested in the dynamic aspects of amniotic fluid exchange and maternal fetal exchange in general. He has presented some of this work at the meeting of the American Association of Anatomists last year. His paper was entitled "Localization of P32 Injected Intraperitoneally in the Fetal Mouse". He also participated in a group discussion by invitation at the 1st International Congress on Developmental Biology at Providence, Rhode Island. The subject was "Phosphatase Need of the Embryo".

Research Activities of Elwyn Saunders, Instructor in Anatomy

Dr. Saunders is primarily interested in hyper-tension and cardio-vascular research. He has started a project which involves the perfusion of human organs obtained at autopsy to obtain quantitative data on size variation of the vessels which form the arterio-venous connections. He is also interested in utilizing methods of direct observations of blood vessels. Another interest of Dr. Saunders is to assist in the development of motion pictures of dissection procedures in order to improve the efficiency of the teaching of gross anatomy.

ATTENDANCE AT NATIONAL AND INTERNATIONAL SCIENTIFIC MEETINGS AND PRESENTATION OF PAPERS BY ANATOMY STAFF MEMBERS

1. 69th Annual Meeting of the American Association of Anatomists at Marquet University, Milwaukee, Wisconsin. Doctors Figge, Nauta, Kuypers, Mack and McCafferty presented papers. Doctors Krah1, Leveque and Saunders attended this meeting.
2. Symposium on the Use of Hematoporphyrin and Radiation Therapy of Cancer, University of Minnesota, Minneapolis, Minnesota. Attended by Doctors Figge and Mack for the purpose of participation in the symposium.
3. The National Cancer Conference sponsored by U. S. Public Health Service and the American Cancer Society, Detroit, Michigan. Attended by Doctors Mack and Figge.
4. Yearly meeting of the American Cancer Society, Scientific and Business Meeting of the American Cancer Society, New York. Dr. Figge attended this meeting as the delegate member from the Maryland Division of the American Cancer Society, November 1956.
5. Ross Symposium, March 29, 30 in Baltimore, Maryland. Discussion of Doctor Schwartz's paper on Porphyrin Metabolism by Dr. Figge.
6. International Cytology Cancer Conference under auspices of the Southern Society for Cancer Cytology, Miami, Florida, April 25 to 29. Attended by Dr. Figge to discuss papers of South American visitors or guests.
7. International Symposium on the Reticular Formation, Detroit, Michigan. Attended by Doctors Nauta and Kuypers who gave a paper and participated in the discussion.
8. Meeting of the American Society for Cancer Research, Atlantic City, April 1956. Attended by Doctors Figge and Mack, who gave papers.
9. First International Congress of Developmental Biology, Providence, Rhode Island. Attended by Dr. McCafferty to participate in a symposium on "Phosphatase Need of the Embryo".
10. Federated American Biological Societies, Atlantic City, April 1956. Attended by Doctors Mack, Figge and McCafferty. Dr. Figge discussed a paper co-authored by Dr. Andersch.
11. Sixth International Congress of Otolaryngology, Baltimore, May 1957. Dr. Krah1 presented a paper on "Anatomy of Terminal Airways".
12. American Medical Association Annual Meeting, New York City, June 1957. Attended by Dr. Krah1.
13. 1st International Congress of Neurological Science, Brussels, Belgium. Attended by H. Kuypers to give a discussion and demonstration.

HOST TO MEETINGS OF THE AMERICAN ASSOCIATION OF ANATOMISTS AND RELATED SOCIETIES AT THE UNIVERSITY OF MARYLAND

Probably the most time consuming and extensive activity with regard to scientific meetings involved playing host to the meeting of the American Association of Anatomists and the Histochemical Society, the Tissue Culture Society and the Cajal Club. The invitation to meet here was accepted at the end of a four year period of service on the executive committee by Dr. Figge. Approximately 1500 people attended these meetings, while practically everyone in the department, and in the department of anatomy in the Dental School, others on the faculty and many of the students participated in this program. Certain members of the staff of the Anatomy Department deserve special mention because of the great amount of effort expended in making this meeting a success. In particular, Dr. Krah1 deserves mention for the excellent manner in which he managed the commercial exhibits. He and Dr. McCafferty also handled the advance registration and registration desks during the meeting. Dr. Mack,

with the assistance of a relatively large number of students, did an excellent job of managing the scientific demonstrations and the exhibits of teaching aids and the historic exhibits. Dr. Leveque, with the assistance of others on the staff and a number of students, had charge of the meeting rooms and projection and turned in an excellent performance. Dr. Saunders had charge of check rooms and signs. He and Dr. McCafferty also had charge of the motion picture program including projection of motion pictures. While this meeting took a considerable amount of our time for approximately an eight month period and delayed some of the research work of some of the members, we nevertheless felt that it was a very successful meeting and that through it we made a good impression for the University of Maryland on the anatomists throughout this country and Canada.

The Tissue Culture Association, the Cajal Club, and the Histochemists arranged their meetings to follow in the same week as the anatomists meetings. We also played host to these associations. The entire program of the Histochemists was tape recorded. Doctors Nauta and Kuypers participated actively in arranging the meeting of the Cajal Club and both gave papers at this meeting. All of these meetings were well attended and the members appeared to be pleased with the arrangements. The Biological Stain Commission, which sometimes meets with the anatomists, also met just before the anatomical meetings, because Dr. Figge was the retiring president.

GRANTS-IN-AID OF RESEARCH RECEIVED BY VARIOUS MEMBERS OF
THE DEPARTMENT OF ANATOMY

Dr. Frank H. J. Figge:	Anna Fuller Fund for Cancer Research	\$ 2,500.00
	U. S. Public Health Service, "Influence of Hematoporphyrin and Sunlight on Anaphylactic Shock"	5,502.00
	The American Cancer Society "Obesity and Cancer"	6,480.00
Dr. H. Patterson Mack:	American Cancer Society, "Influence of Hematoporphyrin on Radiation Treatment of Cancer"	5,500.00
Dr. Eduard Uhlenhuth:	Investigation on Pelvic Anatomy, U. S. Public Health Service	5,000.00
Dr. Vernon E. Krah:	"Finer Structures of the Mammalian Lung", U. S. Public Health Service	4,469.00
Dr. H. G. J. M. Kuypers:	U. S. Public Health Service, "An Anatomical Study of the Ascending Connections of the Brain Stem Reticular Formation"	6,099.00
	"Cortico Fugal Connections to the Pons and Lower Brain Stem"	6,000.00
	U. S. Public Health Service, "Investigation of the Neuro-Secretory Processes in the Hypothalamus"	5,400.00
Dr. Robert McCafferty:	U. S. Public Health Service, "Amniotic Fluid Flow in the Fetal Mouse"	1,100.00
		<hr/> \$48,050.00

SPECIAL GIFTS

Benjamin Green Foundation, to purchase special instruments for research program of Dr. Figge..... \$ 1,500.00

OTHER ACTIVITIES

Finally, it should be mentioned that all of the members of the staff participate in numerous committee meetings. Whenever requested, we plan programs for the University of Maryland TV program. This year we presented a TV show on the History of Teaching Anatomy at the University of Maryland. This same material was presented by Dr. Figge with the assistance of a number of the medical students at the anatomists meeting as a demonstration which utilized effectively the secret stairways and dissecting rooms of the old medical school building.

Most of the anatomy staff also engages in certain extra-curricular activities that have to do with speaking in public meetings of various civic groups and organizations. Probably the chief burden in this respect, however, was carried by Dr. Figge, Chairman of the Department, who by virtue of the fact that he was president of the Biological Stain Commission, and is president of the American Cancer Society, assumed a fairly heavy load of obligations along this line. To illustrate this point, the number of personal appearances at public gatherings in connection with the presidency of the American Cancer Society for the first six months of this year were tabulated by checking the calendar of appointments. Twenty-five such engagements were recorded on the calendar between January 1 and June 30, and included such items as presiding at cancer executive committee meetings, campaign luncheons, after dinner speeches at various organizations, TV and radio appearances. The twenty-five appearances in six months averages one per week and includes three TV shows and three radio transcriptions.

GENERAL DISCUSSION OF THE PRESENT STATUS AND
FUTURE NEEDS OF THE DEPARTMENT

STAFF

In general, it is felt that the anatomy staff is adequate in spite of the fact that one instructorship remained unfilled. This position remained open, not because there was no candidate for it, but it is felt that until the right person can be found it should not be filled. We now have an extremely compatible and homogeneous group and we feel that any additions must be made very carefully.

SPACE

During the year we have voluntarily given up to other departments considerable space that has been used by the Anatomy Department. The room in the Gray Building, which has been used in teaching nurses anatomy, was allocated for a general mouse colony. Room 118 was temporarily allocated for an experimental electro encephalographic research room for Dr. Merlis. A suite of rooms consisting of a laboratory, office, and darkroom was allocated for an electron microscope area to be used jointly by the departments of Microbiology, Pathology, Anatomy, and others. There are still some rooms, however, that are not as useful as could be because the furnishings are inadequate.

quate and inappropriate. It is planned to remedy this condition in the near future because we are in great need of more room for graduate student work and summer medical student fellowships. It is also planned to reorganize the bone room area in the Gray Building and move the present shop from the Bressler Building so as to create additional space for graduate students and research facilities.

This year has been a very busy year. It is evident that the Anatomy Department carries a heavy teaching load and the research program is also very active. The summary of the amounts of grants-in-aid shows that there are ten projects supported by outside agencies with a total budget of almost \$50,000. This is approximately one-half of our State salary and operating expense budget.

It is very necessary for this department to operate twelve months of the year. The research program could not be effectively pursued with any other plan. In addition, the reason we must operate on the twelve-month plan is because people die throughout the year and a considerable portion of our total operation depends on obtaining a sufficient amount of this anatomic material.

DEPARTMENT OF BIOCHEMISTRY

1. *Operating Plan and Ideology*

Each staff member takes charge of laboratory and lecture material in the areas in which he has had special training. This responsibility may include graduate, medical, pharmacy and nursing students. The balance of each man's time is devoted to research on problems of his own selection.

Medical Biochemistry

Basic biochemical principles are frequently supplemented by clinical observations by members of the hospital staff. Concurrent scheduling of physiology and biochemistry has encouraged intimate integration of the two subjects.

Pharmacy Biochemistry

Pharmaceutical principles are avoided. Instead, emphasis is placed upon the blood and urine chemistry and other clinical material in order that the future pharmacists may better understand the problems of the physician.

Nursing Biochemistry

Emphasis is placed upon clinical aspects of biochemistry so that the nurse may be better prepared to perform her hospital duties.

2. *Faculty and Staff*

Schmidt, Emil G.	Professor and Head of Department
Herbst, Edward J.	Associate Professor
Vanderlinde, Raymond E.	Associate Professor
Vasington, Frank D.	Assistant Professor
Brown, Ann Virginia	Instructor
Parker, Arlie B.	Jr. Instructor
Councill, Flo M.	Research Assistant

3. *Teaching*

Graduate students—see "5" below.

Medical students—Biochem. 101 8 credits 110 lectures+192 hours lab.

Pharmacy students—Biochem. 153 5 credits 64 lectures+128 hours lab.

Nursing students—Biochem. 1 3 credits 40 lectures+ 20 hours lab.

4. *Research*

The following research programs have been continued during the 1956-57 fiscal year:

Schmidt, Emil G.—The effect of antibiotics on the products of intestinal putrefaction in the rat.

Herbst, Edward J.—Polyamine metabolism in microorganisms, animal and human tissues.

Vanderlinde, Raymond E.—Pituitary gonadotropic release agents.
Vasington, Frank D.—Estrogen metabolism.

All of the above research programs have been supported in large measure by outside grants which totaled \$19,000.

5. *Graduate Program*

Courses given:

Biochem. 208—Chemistry and Metabolism of Steroid Hormones
3 credits 32 hours.

Biochem. 205—Seminar (Radiobiochemistry) 1 credit 16 hours.

Biochem. 203—Research credit proportional to work accomplished.

In addition to teaching and directing the above courses, the staff supervised 5 advanced degree candidates who are majoring in biochemistry and 5 advanced degree candidates minoring in biochemistry.

6. *Statistical Analysis and Work Done and Service Rendered*

None

7. *Facilities and Equipment*

a. Facilities

1—student laboratory accommodating 50 students at a time.

1—large and 2 small research laboratories.

1—balance room.

1—small departmental library.

2—private offices.

1—janitorial supply room.

1—stockroom and preparation room.

—storage room in attic.

b. Equipment

Usual laboratory and office equipment and following special items:

(1) Sharples, International, International refrigerated and Servall centrifuges.

(2) Deep freeze, ice storage chest, walk-in cold room, walk-in warm room,
3 small refrigerators.

(3) Beckman Model DU Spectrophotometer, photometers.

(4) Sonic disintegrator.

(5) Fraction collector.

(6) Analytrol.

(7) Marchant calculator.

(8) Paper electrophoresis.

(9) Semi-micro balance.

(10) Constant temperature bath.

(11) Warburg.

(12) 50 animal cages.

(13) Scaler and counter for isotope work.

8. *Community Service*

Active participation in local scientific societies. Lectures to local medical groups.

9. *Publications*

SCHMIDT, E. G.; GARDENIER, JEAN; KESSLER, G.: Effect of chemotherapeutic agents on nitrogenous and phenolic constituents of rat urine, *Bull. Sch. Med. U. of Md.* 42, 6, 1957.

KESSLER, G.; SCHMIDT, E. G.; VANDERLINDE, R. E.: Effect of feeding ether extracts of hydrolyzed human urine on growing rats, *Bull. Sch. Med. U. of Md.* 42, 12, 1957.

SCHMIDT, E. G.; KESSLER, G.: Microbiological determination of aromatic acids in the urine of white and negro adults, *J. Lab. & Clin. Med.* 50, 282, 1957.

10. *Recommendations for Improvement*

- a. It is expected that the balance room and janitorial rooms will be converted into radioisotope and metabolism laboratories, respectively. It will be necessary to equip these laboratories in the coming year.
- b. New experiments involving radioisotopes are being planned for our students.
- c. Lecture and laboratory course in radiobiochemistry to be developed for graduate students.
- d. Additional animal and research facilities are desirable.
- e. Air conditioning of research quarters is highly recommended.
- f. Additional research facilities for graduate and postdoctorate training are badly needed.



DEPARTMENT OF MICROBIOLOGY

1. *General statement of operating plan and ideology.*

The mission of the Department of Microbiology of the Medical School may be summarized in the following statements:

- a. To impart basic information and understanding in the fields of microbiology and immunology to medical students, house officers, and practicing physicians in such a way as to provide them with the knowledge and concepts necessary to meet the challenges of medicine, infectious disease, public health and preventive medicine.
- b. To recruit and educate scientists and academicians in the fields of microbiology and immunology through graduate, post graduate and fellowship programs.
- c. To advance the knowledge in the field through an active research program, and
- d. To advise local, state and federal authorities on matters which fall within the scope of our field and to participate in educational, scientific and medical matters at all levels.

Since the Fall of 1954, a concerted effort has been made to fulfill these missions and responsibilities. This has entailed revision of the teaching program, acquisition of new staff, improvement of physical facilities, recruitment of funds from outside sources, and institution of a comprehensive research program. The helpful and strong administrative support from the Dean's Office and the wholehearted co-operation of colleagues in other departments has been of inestimable aid. It is our opinion that some measure of progress has been made in these directions. Needless to say, continued effort will be required over several more years to bring the entire program to a more complete state of maturity. Nevertheless, it is with some pride that we can state that this department is developing a teaching program for medical students which is in step with the most progressive in the country; that it is becoming known at local, national, and international levels for its research program; that it performs advisory functions at the level of the federal and state governments; and that it participates in the functions of such educational and examining bodies as the National Board of Medical Examiners. Details appear in the subsequent sections.

2. *Faculty and staff.*

During the past year, the faculty of the Department of Microbiology has consisted of the following persons:

Charles L. Wisseman, Jr., M.D.	Professor and Head of the Department
Andrew G. Smith, Ph.D.	Assistant Professor
Benjamin H. Sweet, Ph.D.	Assistant Professor
Merrill J. Snyder, Ph.D.	Assistant Professor
Hyman E. Levin, M.D.	Associate (Part-time)
Elizabeth C. Heinz, B.A.	Assistant Instructor

At the beginning of this fiscal year, Dr. Edward Steers, Associate Professor, left the Department to take a position at the University of Pennsylvania. Recruitment for replacement is actively proceeding.

This faculty has served faithfully and enthusiastically in discharging its teaching responsibilities. Nevertheless, some comments are in order regarding the status of the faculty. Dr. Snyder, who holds a teaching appointment in this department, is supported entirely by the Department of Medicine and it is through the generosity of the Department of Medicine that Dr. Snyder's services are made available to the Department of Microbiology. His valuable participation in the affairs of this department is limited to the teaching of the course in medical microbiology for the medical students and does not extend to the research and other functions of the department. Dr. Sweet originally joined the department on a research project. However, he has shown keen interest in the teaching program and has proved to be a very valuable asset. Dr. Sweet is now fully integrated into all functions of the department. Dr. Levin, who has been associated with the department for many years, serves faithfully in the teaching program and is a valuable asset in the student laboratory. Again, the nature of his appointment prohibits his participation in the research and most other functions of the department. Dr. Smith has been promoted to the rank of Associate Professor, effective July 1, in recognition of his responsible position in the departmental teaching program.

In evaluating the adequacy of this faculty for the execution of the overall missions of the department, the following observations would appear appropriate: (1) When the remaining open position is filled, the faculty would appear nearly adequate to cover the lecture portion of the course in medical microbiology; (2) Even with this position filled, the instructor-student ratio is less than optimal for best results in the student laboratory under present conditions; (3) Only a part of the faculty listed above is available for participation in research activities, graduate and post graduate training and other departmental functions.

The remainder of the staff, which consists of 11 individuals employed on a classified basis, will not be listed individually. They fall into the following categories: (1) Technical assistants supporting teaching and research efforts; (2) Secretarial assistance; (3) Preparation room personnel; (4) Animal caretakers; and (5) Janitorial assistance. Almost half of these persons are currently supported by research contracts and grants derived from sources outside the regular budget. The preparation room and the animal facilities, because of increased demands from teaching and research activities, are in particular need of additional personnel.

3. *Teaching Program*

The major teaching effort of this department goes into the course on medical microbiology for the medical students. In addition to this, other courses are offered as a part of the graduate training program. Finally, members of the department participate in teaching sessions sponsored by other departments within the school and at various hospitals and institutions outside the school.

a. *Medical Microbiology*

The greatest unified departmental teaching effort goes into the course in medical microbiology given to the sophomore students in the Fall semester of each year. This course was formerly given throughout the year; the first semester was devoted to bacteriology and the second semester to immunology. The immunology portion consisted of one lecture and one laboratory period per week. In the last three years the philosophy underlying the course for medical students has been undergoing critical re-examination. The guiding principle has been evolved that the material within our field should be presented to medical students in such a way to be of maximal use to them as physicians. The two sections of the course have now been combined and are presented in one semester so as to give the student an integrated picture of the characteristics of the disease producing microorganism, the way it produces its effects on the patient, how the body defense mechanisms operate and how the balance between the invading organism and the patient can be altered. Basic principles are strongly emphasized; coverage of the subject matter is fairly comprehensive; time devoted to different subjects is reapportioned in accordance with the currently recognized relative importance of the different groups of disease producing organisms. The laboratory has been designed to illustrate as many of the important phenomena as is practical. An entirely new laboratory manual has been compiled. Subject matter, laboratory exercises and methods of teaching are under continuous reevaluation and critical reexamination.

All faculty members of the various professional ranks participate in the lecture series in accordance with their interests and special knowledge and all faculty members participate in supervision of students in the laboratory portion of the course. While the overall policies pertaining to the laboratory are arrived at through faculty discussion, Dr. Andrew G. Smith has assumed the responsibility of administering the student laboratory work on the detailed day to day basis and has organized a competent team which exercises this function in a very fine manner.

b. Other Courses

The department has offered a limited series of specialized courses designed primarily for the needs of our graduate students. One of the recent additions to this series of courses is the one in medical mycology given by Dr. Smith. Not only has this particular course served the graduate students but it has also been attended by residents in dermatology to supplement their basic training program and by laboratory technicians from various parts of the school. A new course in bacterial cytology is also being offered on a demand basis for graduate students.

c. Extra-Departmental Teaching

This department has co-operated in every way possible with other departments of the school in an attempt to integrate basic science material with the clinical subjects. During the past year, Dr. Wisseman has held regular sessions with the junior students in clinical pathology on laboratory diagnosis of febrile

illness and with junior students in obstetrics and gynecology on basic and applied aspects of microbiology in this clinical specialty. Dr. Wisseman also gave a series of lectures on inflammation and on the pathology of rickettsial diseases to the students of the sophomore course in pathology and several lectures in parasitology in the clinical pathology course. Finally, Dr. Wisseman has participated in the teaching of senior students in the Medical Out-Patient Department during the second semester of the current year one day each week insofar as his other duties would permit him.

4. *Research Program*

Considerable effort has gone into developing an active research program in this department. Progress in this area has gone hand in hand with the improvement in physical facilities and equipment. At the present time approximately \$50,000 a year is being obtained from outside sources to support specific research projects. The major research activities at the present are briefly reviewed below:

- a. *Attenuated Living Vaccines for Arthropod-borne Virus Diseases.* Dr. Wisseman and Dr. Sweet are collaborating on a project generously supported under contract from the Office of the Surgeon General, Department of the Army, and sponsored by the Commission on Immunization of the Armed Forces Epidemiological Board. This project emphasized particularly the development of practical vaccines for the protection of troops against dengue fevers. In its broader aspects this project also must deal with fundamental problems of immunity and cross-immunity to yellow fever, Japanese encephalitis, Russian spring summer encephalitis and other arthropod-borne viral diseases. The substantial financial support for this project has aided immeasurably the establishment of good facilities for virus research within the department. This project entails a wide variety of techniques and procedures and has necessitated development of facilities for tissue culture, neutralization tests in animals, safety testing in monkeys and field testing in volunteers. Dr. Sweet has contributed very significantly to the development of a sound research program on viral diseases. In connection with this project Dr. Wisseman carried out field studies in the Far East in 1956 where he worked in collaboration with army and civilian medical authorities and scientists in Japan and in Malaya. It is anticipated that further overseas studies in endemic zones of interest will be a natural part of this project. The fine working relationship with the Commission on Immunization promises to yield continued support for studies in this important area and for contact with scientists on an international basis.
- b. *Studies on host-parasite interactions* are being carried out under Dr. Wisseman's direction with particular emphasis on rickettsial infections of the typhus group and on infections with tularemia organisms. Here, basic research supported by a grant from the United States Public Health Service is being carried out to explore rapid diagnostic techniques, the role of phagocytic cells in body defense mechanisms against rickettsial infections and factors influencing the intracellular growth of tularemia organisms; some basic biochemical studies are being carried out on typhus rickettsiae; and, in collaboration with

Dr. Sheldon E. Greisman, physiologic studies on the mechanism of the action of rickettsial toxin in experimental animals are being pursued. This general area of rickettsial disease constitutes a second major research interest in this department. Work along these lines will continue and, indeed, application has been made for a grant from the Public Health Service to support a training program in this field.

- c. In Dr. Andrew G. Smith's laboratory research is being carried out along the following lines: cytologic observations on the germination of *Clostridium perfringens* spores; characterization of an antifungal antibiotic produced by a species of *Bacillus*; chemotherapeutic studies on *Cryptococcus* infections; and techniques applicable to the cytologic study of bacteria. This work has been supported primarily by local and departmental sources as well as by funds from one of the drug companies.
- d. A small program on the screening of compounds for anti-viral activity is being instituted through arrangements with one of the drug houses in the hopes that some agent may be discovered which will be effective in the therapy of viral infections.
- e. Dr. Sheldon E. Greisman of the Department of Medicine has been carrying out an active research program within the Department of Microbiology. In addition to the physiologic studies of rickettsial toxins and endotoxins on the vascular system of experimental animals mentioned previously, he has continued work in this department on a project initiated at the Hemorrhagic Fever Center in Korea in 1953 and 1954 dealing with injurious effects of human plasma on the peripheral vascular system of laboratory animals. It was in connection with this problem that Dr. Greisman and Dr. Wisseman became associated under field conditions in Korea and it was in anticipation of pursuing this project that Dr. Greisman originally joined the staff at the University of Maryland. Dr. Greisman has been carrying out an aggressive research program which puts to use his unique training in vascular physiology and his interests in immunology. Areas under investigation include anaphylaxis, vascular effects of hyperlipemic states and humoral factors injurious to the vascular system in traumatic and hemorrhagic shock. While most of the studies to date have been supported from local sources, Dr. Greisman has recently been awarded a research grant from the U. S. Public Health Service to support some of these investigations and he has another grant pending. His position here is unique; while he holds an appointment in the Department of Medicine, his research interest has transgressed departmental barriers, centering mainly in the Department of Microbiology but extending also into the Department of Surgery. It has been a pleasure and a privilege for the Department of Microbiology to support him in his work and to collaborate with him on problems of mutual interest.
- f. During the past several months, Dr. Grange S. Coffin of the Department of Pediatrics has been working in this department in exploratory studies on bactericidal and bacteriostatic agents in the human placenta which may serve

as a barrier to the passing of infectious agents from the mother to the fetus. We consider it a privilege to be able to provide facilities for this kind of work. The research program has provided excellent opportunities for medical students on summer fellowships and it is anticipated that it will provide a basis for a very strong graduate and post doctoral training program.

5. *Graduate Program*

This department offers a graduate training program for the degrees of Master of Science and Doctor of Philosophy in Medical Microbiology. During the past year considerable revision has been made in the graduate training curriculum based upon a redefined philosophy. It is felt that persons graduating with an advanced degree from this department should be competently and broadly trained in medical microbiology and ancillary areas. The graduate training program should provide an adequate background for the areas into which medical microbiologists commonly venture, i.e., teaching, research, diagnostic and practical aspects of medical microbiology, and industrial, governmental and public health laboratories. Toward these ends a program is being developed which will make greater use of the courses available in other parts of the University structure, which will provide the candidate with the desirable and necessary teaching experience, which can provide opportunity for gaining familiarity with practical medical microbiology and which provides ample opportunity for development in original research lines. This program will be integrated very closely with the medical school's newly formulated plan of a combined M.D.-Ph.D. degree for selected students.

6. *Service Functions of the Department*

Since last Fall, Dr. Wisseman has assumed consultative and supervisory responsibilities in the diagnostic serology and bacteriology laboratories of the University Hospital. It is anticipated that this new relationship will be mutually beneficial to the Department of Clinical Pathology and the Department of Microbiology and that these laboratories will be integrated eventually into the projected training programs for medical technologists, residents in clinical pathology and graduate students in the Department of Microbiology. Dr. A. G. Smith has rendered advisory and consultative service in medical mycology to various sections of the institution from time to time.

7. *Facilities and Equipment*

The facilities and equipment have long been grossly inadequate for a modern teaching and research program in medical microbiology. In the attempt to correct this situation, a long range developmental program has been instituted which undoubtedly will require a period of years to mature. An extensive remodeling program has been put into effect and already has improved the teaching area, provided departmental offices, and freed space for research laboratories. Moreover, new laboratory space has been acquired, remodeled, furnished and equipped. This slow process must continue until all areas in the department are adequately housed and equipped. A large part of the departmental operating funds has gone into purchase of equipment for the student laboratory and for essential general depart-

mental equipment. The new research laboratories have been equipped through research grants and contracts. In addition to these strictly departmental ventures, this department has co-sponsored successfully requests to the Public Health Service for funds to buy certain items of expensive capital equipment for interdepartmental use, such as analytical and preparative ultracentrifuges and an electron microscope.

The importance of providing adequate physical facilities and equipment cannot be over-emphasized. It is essential to both teaching and research programs. Moreover, failure to be able to exhibit reasonable facilities has been a serious deterring factor to acquisition of new faculty personnel in the past. We believe that the facilities are just now approaching a minimally satisfactory state of development for attracting the desirable kind of faculty, fellow, and graduate student. Nevertheless, this costly effort must be continued for a time so that the teaching program can mature properly and the research effort can progress and that good faculty members remain content to stay at the University of Maryland.

8. *Community Service*

The Department of Microbiology is now represented on several state and national bodies. Dr. Wisseman serves as a member of the Bacteriology Test Committee of the National Board of Medical Examiners, as a member of the Medical Advisory Committee of the Chemical Corps Advisory Council for the U. S. Army, as associate member and responsible investigator of the Commission on Immunization of the Armed Forces Epidemiological Board and as member and deputy director of the Commission on Rickettsial Diseases of the Armed Forces Epidemiological Board. He has recently been appointed to the Advisory Committee on Influenza to the Maryland State Department of Health. Dr. Sweet serves as Principal Professional Assistant to the research program sponsored by the Commission on Immunization.

9. *Lectures, Conferences, Papers Read, and Publications*

a. *Lectures, Conferences, etc.*

- (1) Dr. Wisseman (Microbiology) and Dr. McCrumb (Infectious Diseases) conducted a post-graduate teaching session on November 21, 1956, on Infectious Diseases--Modern Diagnosis and Treatment for the Delaware Academy of General Practice in Wilmington, Delaware, under the auspices of our Postgraduate Committee.
- (2) Dr. Wisseman conducted a staff conference on staphylococcal pneumonia at the Union Memorial Hospital in Baltimore on Feb. 6, 1957.
- (3) Dr. Wisseman gave a lecture entitled *Problems in Rational Chemotherapy* for the University of Maryland Postgraduate Course on Basic Sciences as They Apply to the Practice of Medicine, on March 20, 1957.

b. *Papers Read at Meetings*

- (1) Wisseman, C. L., Jr.: Physiologic studies on the action of rickettsial toxins. Maryland Branch, Society of American Bacteriologists, 1956.
- (2) Gauld, J. R.; Wisseman, C. L., Jr. and Swanson, R. C.: Phagocytosis and opsonization of typhus rickettsiae. Maryland Branch, Society of American Bacteriologists, April 6, 1957.

- (3) Smith, A. G. and Heinz, E. C.: Cytologic observations on the germination of *Clostridium perfringens* spores. Maryland Branch, Society of American Bacteriologists, April 6, 1957.

c. *Publications:*

- (1) Smith, Andrew G. and Ellner, Paul D.: Cytologic observation on the sporulation process of *Clostridium perfringens*. J. Bact. **73**: 1—(1957).
 (2) Hahn, F. E.; Hayes, J. E.; Wisseman, C. L., Jr.; Hopps, H. E. and Smadel, J. E.: Mode of action of Chloramphenicol VI. Relation between structure and activity in the Chloramphenicol series. Antibiotics and Chemother. **6**: 531-543 (1956).
 (3) Hopps, H. E.; Hahn, F. E.; Wisseman, C. L., Jr.; Jackson, E. B. and Smadel, J. E.: Metabolic studies of rickettsiae. III. Studies of transamination oxidative phosphorylation and glutamate -2-C¹⁴ incorporation by purified suspensions of *Rickettsia mooseri*. J. Bact. **71**: 708-716 (1956).
 (4) Hopps, H. E.; Wisseman, C. L., Jr.; Hahn, F. E.; Smadel, J. E. and Ho, R.: Mode of action of Chloramphenicol IV. Failure of selected natural metabolites to reverse antibiotic action. J. Bact. **72**: 561-567 (1956).
 (5) Wisseman, C. L., Jr.: *Scrub Typhus*. Ch. 63, pp. 464-469, in Meakins, J. C. The Practice of Medicine 6th Ed., C. V. Mosbey Co., 1956.

10. *Recommendations for Improvement*

- a. *Physical facilities.* Many recommendations for improvement of physical facilities could be made most appropriately. Most of these, however, could not be brought to fruition practically without a new basic science building carefully designed to meet the needs of an actively growing department and it is earnestly hoped that serious consideration is being given to the matter for early construction of modern and adequate facilities for the basic sciences as a whole.

Of immediate concern is the need for remodeling and equipping existing laboratory space for a metabolic unit. Three small, badly designed and inadequately furnished laboratories located within the departmental area on the second floor at the Pathology Building are destined to become the work area for a unit devoted to the study of microbial metabolism. In order to be able to attract a competent person to fill the open faculty position, it will be necessary to provide reasonable facilities. This laboratory constitutes the only area now a part of this department which has not been brought up to a minimally satisfactory standard. Plans are being drawn up for remodeling this section and will be submitted for consideration.

- b. *Personnel.* From a totally practical point of view, the matter of adequate supporting personnel in the Preparation Room is most urgent. The increased demands which have fallen on this section have been described above in Section 2 under Staff. Accordingly, request has been made in the 1958-1959 budget for the necessary additional support.

Future faculty requirements can best be estimated as the current program matures and will be presented as needs arise.

DEPARTMENT OF PHARMACOLOGY

1. *Operating plan and ideology*

The aim of the course is to teach the principles which underlie the use of drugs in the treatment, cure, mitigation and diagnosis of disease.

2. *Faculty and Staff*

John Christian Krantz, Jr., Ph.D., Professor of Pharmacology and Head of the Department.

Frederick K. Bell, Ph.D., Assistant in Pharmacology.

Raymond Merritt Burgison, Ph.D., Associate Professor of Pharmacology.

Ruth Musser, M.S., Instructor in Pharmacology.

Edward Byrd Truitt, Jr., Ph.D., Associate Professor of Pharmacology.

ADJUNCT FACULTY

Joseph McCurley White, III, M.D., Lecturer in Pharmacology.

Stephen Krop, Ph.D., Lecturer in Pharmacology.

From the Academy of General Practice:

Louis V. Blum, M.D.

Walter A. Anderson, M.D.

Adalbert Schubart, M.D., Resident in Medicine.

Harold H. Bryant, Ph.D.

3. *Teaching*

The instruction is designed to include those phases of pharmacology necessary for an intelligent use of drugs in the treatment of disease. The didactic instruction includes materia medica, pharmacy, prescription writing, toxicology, posology, pharmacodynamics, and experimental therapeutics. The laboratory exercises parallel the course of lectures. In addition, conference periods and discussion groups are given weekly with the faculty and adjunct faculty.

From 10 to 15 visiting lecturers give instruction to our class in the broader aspects of pharmacology and many current research projects. The teaching is integrated with the clinical departments of medicine, anesthesiology and obstetrics by inter-departmental lectures.

4. *Research*

- a. Synthesis and pharmacologic study of theophylline derivatives in hypertension.
- b. Study of new fluorinated ethers as anesthetics.
- c. Study of new fluorinated ether (Indoklon) in the treatment of mentally ill patients.
- d. Alcohol and acetaldehyde in cerebral metabolism.
- e. Salicylate absorption.
- f. Aliphatic iodides in torulosis (with microbiology).
- g. Alkali metal ions and red cell hemolysis.
- h. Myristicin euphoria and toxicity (with psychiatry).
- i. Toxicity of organic boron derivatives.

5. *Graduate program*

Four students working for Ph.D. degree.

Participation in graduate instruction in basic science for Postgraduate Committee.

Graduate course in pharmacologic methods: 62 hours given to graduate students on Baltimore campus by Dr. Truitt.

6. *Statistical Analysis.* No comment.7. *Facilities and equipment*

Third floor of Bressler Building with adequate equipment for teaching and research in pharmacology and cognate sciences.

8. *Community service*

Revision of formulary for medically indigent, for Baltimore City Health Department.

Service on U.S.P. Revision Committee.

Service in National Research Council data compilations.

Advisory Committee on Medical Care.

Numerous public lectures.

Revision of textbook in pharmacology.

9. *Publications*

WOLPERT, A.; TRUITT, E. B., JR.; BELL, F. K. and KRANTZ, J. C., JR.: Anesthesia L. The effect of certain narcotics on oxidative phosphorylation. *J. Pharmacol. Exper. Therap.*, **117**: 358, 1956.

KRANTZ, J. C., JR.: Editorial. Admission to your medical school. *Bull. Sch. of Med., Univ. of Md.*, **41**: 73, 1956.

KRANTZ, J. C., JR.: The sulfonamides after two decades. *International Record of Medicine*, **169**: 553, 1956.

O'MALLEY, W. E.; TRUITT, E. B., JR.; HULME, N. A. and KRANTZ, J. C., JR.: Anesthesia LII. Pharmacologic study of certain ethinyl barbiturates. *Anesthesiology*, **17**: 585, 1956.

KRANTZ, J. C., JR.: The use of drugs in bronchial asthma. *Current Medical Digest*, **23**: 63, 1956.

WHITE, J. M.; HEISSE, C. K. and KRANTZ, J. C., JR.: Anesthesia XLIX. Hypnosis with analgesic combinations. *Current Researches in Anesthesia and Analgesia*, **35**: 526, 1956.

TRUITT, E. B., JR.; BELL, F. K. and KRANTZ, J. C., JR.: Anesthesia LIII. Effects of alcohols and acetaldehyde on oxidative phosphorylation in brain. *Quarterly Journal of Studies on Alcohol*, **17**: 594, 1956.

BURGISON, R. M.; O'MALLEY, W. E.; HEISSE, C. K. and KRANTZ, J. C., JR.: Pharmacologic studies with 8-(para-aminobenzyl)-caffeine and certain related compounds. *J. Pharmacol. Exper. Therap.*, **119**: 107, 1957.

KRANTZ, J. C., JR.: Present status of psychopharmacology. *Modern Medicine*, January 15, 1957, p. 75.

TRUITT, E. B., JR.: Pharmacology of the Ataractic Drugs. *Modern Medicine*, January 15, 1957, p. 77.

DEPARTMENT OF PHYSIOLOGY

1. *General Statement*

The department is organized (1) to teach physiology to freshmen medical students, (2) to instruct graduate students, and (3) to conduct investigation.

2. *Faculty and Staff*

William R. Amberson, Ph.D., Professor of Physiology and Head of the Department.

Dietrich C. Smith, Ph.D., Professor of Physiology.

Frederick P. Ferguson, Ph.D., Professor of Physiology.

John I. White, Ph.D., Assistant Professor of Physiology.

Samuel L. Fox, M.D., Assistant Professor of Physiology.

Sylvia Himmelfarb, A.B., Instructor in Physiology.

Jeanne A. Barry, B.A., Junior Instructor in Physiology.

Armand J. Gold, Ph.D., Assistant Professor of Physiological Research.

J. Henry Wills, Ph.D., Lecturer in Physiology.

3. *Teaching*

The basic course in physiology is given to first year medical students in the second semester. The course includes 75 lectures, 15 conferences and 120 laboratory hours for each student. Lectures are prepared by staff members mainly from the original literatures, rather than from text books. A free atmosphere is maintained in lecture and laboratory, with student question and suggestion invited, optional work is permitted, and a critical attitude encouraged. Mammalian operative work is emphasized. A portion of the laboratory sequence consists of demonstrations, including ophthalmoscopy, electrocardiography, the electroencephalogram, radiology, radioisotopes, the oscilloscope, electrophoresis and the ultracentrifuge.

Dr. Amberson has participated in the teaching program of the Department of Obstetrics and Gynecology.

4. *Research*

(1) Dr. Smith and Dr. Ferguson, with the collaboration of Dr. Gold, Mrs. Barry and Miss Elaine Silver, have continued their research on the effect of acute decompression stress upon water and electrolyte distribution and renal function. At the present time particular attention is directed toward the study of physiological mechanisms which operate to decrease the concentration of plasma potassium in dogs during moderate decompression produced by exposure to a simulated altitude of 30,000 feet for 30 to 90 minutes. This program is currently being supported by a grant from the U. S. Public Health Service. Members of this research group have presented two papers at meetings of national scientific organizations during the current fiscal year. Mrs. Barry delivered a paper before the April meeting of the American Physio-

logical Society in Chicago, Illinois. In May, Dr. Ferguson spoke at the meeting of the Aero Medical Association in Denver, Colorado.

- (2) Dr. John I. White and Miss Sylvia Himmelfarb have continued research in the muscle protein field, extending the observations reported in the last three papers of the publication list given below. This work is supported by a grant from the U. S. Public Health Service. The new fibrous Δ protein, extracted from skeletal muscle, has now been crystallized. Two highly birefringent crystalline forms have been observed. Solutions made from this crystallized material show a considerably higher viscosity than do the original cruder extracts. Complex formation with myosin has been demonstrated, both in electrophoresis and in the synthetic boundary cell in the ultracentrifuge. Δ protein resembles nucleotropomyosin in crystal structure, but is sharply distinguished from the latter molecule by the absence of nucleic acid.
- (3) Under Dr. Amberson's direction, Mr. Richard L. Glasser completed his doctoral thesis, devoted to a study of a reflex center in the lower pons whose hyperactivity, after midpontile transection and double vagotomy, causes an enduring increase in blood pressure and heart rate. These results were presented before the spring meeting of the American Physiological Society, held in Chicago in April. Mr. Glasser received the Ph.D. degree from this University in June. He has now joined the staff of the Department of Physiology, School of Medicine, University of North Carolina.

5. *Graduate Program*

Graduate students take the basic course with the medical students. They meet with a member of the staff each week for further discussion of major topics. Other graduate courses are available, as shown in the catalogue.

A special situation in respect to graduate instruction has developed during the year. For the last eight years a graduate program in physiology, biochemistry and pharmacology has operated at the Army Chemical Center under the auspices of the University of Maryland. The University and the Army have been bound by contract in giving this work. The Army failed to renew the contract in the summer of 1956, and courses scheduled for 1956-1957 could not be given as planned. At the beginning of the second semester this Department decided to reopen graduate instruction in physiology at the Center, without benefit of contract. This emergency program has been approved by the University authorities, and permitted by the Army command. A weekly seminar has been given through the second semester. An attempt is being made to qualify a small group of graduate students for the master's and doctor's degree. Staff services are being rendered without compensation. Course fees are paid to the School of Medicine.

6. *Statistical Analysis*—Not applicable.

7. *Facilities and equipment*

As the result of a special grant from the U. S. Public Health Service the Department has purchased a Spinco analytical centrifuge, with all accessories. A preparative ultracentrifuge has also been acquired from the same grant. Room 420

has become an ultracentrifuge room, used mainly by the research group which is studying the new fibrous muscle protein, but open to other departments which wish to use the equipment. This room operates under the direction of Dr. White.

8. *Community Service*—Nothing to report.

9. *Publications during the Fiscal Year, July 1, 1956-June 30, 1957.*

FERGUSON, F. P.; SMITH, D. C. and BARRY, J. Q.: The response of plasma potassium to acute decompression stress in adrenalectomized dogs. Air University, School of Aviation Medicine, USAF, Report No. 57-14, pp. 1-12, Nov., 1956.

BARRY, J. Q.; FERGUSON, F. P. and SMITH, D. C.: Effect of moderate and severe decompression on blood glucose of adrenalectomized dogs. *Federation Proc.* **16**, 8, 1957.

FERGUSON, F. P.: Potassium changes in dogs during acute decompression stress. *J. Aviation Med.* **28**, 199, 1957.

FERGUSON, F. P.; SMITH, D. C. and BARRY, J. Q.: Hypokalemia in adrenalectomized dogs during acute decompression stress. *Endocrinology* **60**, 761-767, 1957.

GLASSER, R. L.: Lower brain stem facilitation of cardiovascular activity. *Federation Proc.* **16**, 47, 1957.

AMBERSON, W. R.; WHITE, J. I.; BENSUSAN, H. B.; HIMMELFARB, S. and BLANKENHORN, B. E.: Δ Protein, A new fibrous protein of skeletal muscle: Preparation. *Am. J. Physiol.* **183**, 205-211, 1957.

WHITE, J. I.; BENSUSAN, H. B.; HIMMELFARB, S.; BLANKENHORN, B. E. and AMBERSON, W. R.: Δ Protein, A new fibrous protein of skeletal muscle: Properties. *Am. J. Physiol.* **183**, 212-218, 1957.

BENSUSAN, H. B.; WHITE, J. I.; HIMMELFARB, S.; BLANKENHORN, B. E. and AMBERSON, W. R.: Δ Protein, A new fibrous protein of skeletal muscle: Complex formation with myosin. *Am. J. Physiol.* **183**, 219-226, 1957.

10. *Recommendations for Improvement*

The Department should have additional space. A number of small rooms are needed for special techniques taught in the basic medical physiology course. If more graduate students are to be enrolled, one or two more rooms should be available.

The Survey Team which examined the School of Medicine in November, 1955, recommended the creation of a new instructorship in this Department, to be filled by a young Ph.D. skilled in electronic methods. Proposals for the creation of this recommended post have not been accepted by the administration. The departure of Dr. Glasser renders this need even more imperative.



CLINICAL DEPARTMENTS

DEPARTMENT OF ANESTHESIOLOGY

DEPARTMENTAL PERSONNEL

Physician Staff:

Attending:

Martin Helrich, M.D., Professor of Anesthesiology and Anesthesiologist-in-Chief
Paul R. Hackett, M.D., Anesthesiologist and Assistant Chief
Howard S. Liang, M.D., Associate Anesthesiologist
Dorothy C. Holzworth, M.D., Associate Anesthesiologist
Thomas D. Graff, M.D., Anesthesiologist
Douglas H. Smith, M.D., Anesthesiologist
John R. Marshall, M.D., Anesthesiologist

Residents:

Edward J. Sheffman, M.D., Resident
Edward S. Klohr, Jr., M.D., Resident
Lucila P. Lesser, M.D., Resident
Elizabeth Dorringer, M.D., Resident
Heinrich Loseman, M.D., Assistant Resident
Ronald Mendelsohn, M.D., Assistant Resident
Frederick Teshner, D.D.S., Assistant Resident

Nurses:

Mary J. O'Brien, R.N., Nurse Anesthetist, Supervisor
Elizabeth Maszarose, R.N., Nurse Anesthetist
Corinne Moore, R.N., Nurse Anesthetist
Cynthia McNerney, R.N., Nurse Anesthetist

In addition to the above named personnel, interns on a one month basis, surgical assistant residents on a two month basis, and dental interns on a three month basis rotated through this service.

Dr. Martin Helrich joined the Department of Anesthesiology in October of 1956 as Professor and Chairman to fill the vacancy left by the resignation of Dr. Robert Dodd. The interim period from Dr. Dodd's resignation in February of 1956 until Dr. Helrich's arrival was ably managed by the Associate Professor, Dr. Paul Hackett. Dr. Howard S. Liang and Dr. Dorothy C. Holzworth were both promoted from assistant to associate anesthesiologists. Dr. Douglas H. Smith became the first graduate of our residency program in Anesthesiology to join the staff of the department. Dr. Smith resigned after completing one year in this capacity to the armed forces. Dr. Thomas D. Graff joined the department as instructor in Anesthesiology for a period of six months during the past year. He has since left to practice at another hospital in the Baltimore area but continues to take an active part in research and teaching activities. This past year saw the expansion of the residency program to include three

residents and three assistant residents. The teaching program has been markedly expanded to include anesthesia for thoracic surgery at the Mount Wilson State Hospital, anesthesia for pediatric-orthopedic patients at the Kernan Hospital for Crippled Children, and a one month affiliation for each of the residents at the Children's Hospital of Philadelphia. These affiliations have been invaluable in expanding the variety and scope of material offered to our residents during their training program.

Departmental Activities

The following medical meetings were attended by members of the department during the past year: the meeting of the American Society of Anesthesiologists at Kansas City, the Post-graduate Assembly in Anesthesiology at New York City at which time a paper on the "Circulatory Effects of Preoperative Medication" was presented by Dr. Helrich, a symposium of under water and high altitude physiology under the auspices of the Medical Education for National Defense (MEND) and the meeting of the Association of University Anesthetists which was held in Philadelphia.

Several talks were presented by various members of the department. Dr. Helrich conducted a round table discussion on the "Use of Tranquilizers in Anesthesiology" at the annual meeting of the Maryland State Medical Society. Dr. Hackett presented a discussion on the "Use of Hypothermia in Cardiac Surgery" on the closed circuit television program for Alumni Day. Dr. Helrich discussed the "Untoward Effects of Tranquilizers" at the County Medical Society meeting in Salisbury. Dr. Helrich presented a paper on the "Circulatory Effects of Spinal Anesthesia" at the Columbia Presbyterian Medical Center in New York. Drs. Hackett and Helrich addressed the newly formed Maryland Dental Society of Anesthetists. The Department of Pharmacology and the various classes in the Dental School were addressed by various members of the department. A half hour TV program on the "Management of Anesthesia for Tonsillectomy" was presented as part of the University-WBAL TV-MD series.

Several distinguished guest lecturers were sponsored by the Department of Anesthesiology during the past year. A Symposium on Nerve Block and a Nerve Block Clinic was presented by Dr. E. A. Rovenstine, Professor of Anesthesiology at the N. Y. U. Bellevue Medical Center in New York; Dr. E. H. Connor, Chief of the Department of Anesthesiology at Philadelphia General Hospital presented a lecture on the "Study of the Circulation". The Saturday morning combined seminar was addressed by Dr. Robert D. Dripps, Professor of Anesthesiology at the University of Pennsylvania who discussed the "Management of Mass Casualties". Dr. Henry L. Price, Associate Research Professor of Anesthesiology at the University of Pennsylvania lectured on the "Relationship of Epinephrine and Norepinephrine to Anesthesiology". Dr. Donald H. Stubbs of Washington, D. C. presented a fascinating discussion of the "Anesthesiologist as a Physician". Dr. James O. Elam of the Army Chemical Center and the Department of Anesthesiology at Roswell Park Institute in Buffalo offered a new concept in the management of carbon dioxide absorption. In addition to these visitors, several distinguished speakers from the Baltimore area were heard by the local group.

Research

Although there were no individual efforts on the part of the Department of Anesthesiology in the investigated field during the past year, several members of the department were actively engaged in research activities in affiliation with research teams from other departments. The study of a pump oxygenator for cardiac bypass during intracardiac surgery was investigated by Dr. Hackett with the thoracic surgery team. In conjunction with the Department of Electroencephalography studies on the effects on the cortex of high spinal anesthesia have been initiated by Dr. Helrich. In affiliation with this same department and the neurosurgery group, an effort is being made by Dr. Hackett to determine the electro-encephalographic effect of hypothermia and ligation of the cerebral circulation during operation for cerebral aneurysm. Dr. Klohr worked with the Department of Pharmacology and the Department of Psychiatry on the investigation of the use of a fluorinated ether to produce shock therapy.

The chemistry laboratory of the Department of Anesthesiology has been completed and is situated on the seventh floor of the Psychiatric Institute. It is a completely equipped laboratory and will be capable of handling the analysis of all varieties of samples pertaining to anesthetic agents as well as other body chemical changes. In addition, space has been allotted by the Department of Surgery in their dog laboratory in the Bressler Building. At the present time, Dr. Graff is actively engaged in studying the effect of varying concentration of carbon dioxide on the incidence and type of cyclopropane–epinephrine arrhythmias in the dog.

Equipment

Considerable new equipment has been obtained during the past year. A physiologic monitoring unit has been constructed for use in the operating room. It will make possible the measurement of arterial blood pressure, end expiratory carbon dioxide, the electrocardiogram, and the electroencephalogram with simultaneous recording of these four parameters. In addition, a cardioscope for use on the cardiac-surgery patients has been made available to us by the Cardiology Department. A "Thermo-rite" blanket type heating and cooling unit has been secured to supplement our use of the tub available for the treatment of apneic patients. In addition, there is an Emerson Ventilation Meter for measuring tidal volume in anesthetized patients. The arrival of two new anesthesia gas machines has made possible the release of some equipment for use in the obstetric delivery rooms. The department is most grateful for the generous support of the Women's Board who made possible the purchase of much of this equipment.

Library

Through the efforts of Dr. Stone, the anesthesia library has been enlarged to include most available standard texts in anesthesiology as well as subscriptions to six excellent journals on anesthesiology. These are readily available for use by the staff and residents. This ready availability of current literature has resulted in much more fruitful utilization of spare time by many of the staff.

A file of teaching slides has been started and now numbers approximately 300 slides which are available to all of the staff for their lectures and other teaching activities. The

residency training program, as has been mentioned above, has had an excellent supply of teaching material at the University Hospital supplemented by the opportunities available at Mt. Wilson, Kernan, and the Children's Hospital of Philadelphia. A recent inspection by the AMA resulted in approval with very favorable comments from the AMA representative. It is expected that a further inspection will be made by the American Board of Anesthesiology in the fall. It is hoped that we will be able to increase the residency program to three years in the near future. Although this has not as yet been required by the American Board of Anesthesiology it is suspected by many that it will be a requirement in the not too distant future. It is hoped that the third year would be spent by the resident in full time research activity under the guidance of one of the research staff. With our present laboratory facilities, this transition should be made without difficulty.

Undergraduate Education

In addition to the lectures given to the junior and senior class, each member of the senior class has spent a period of one week in the operating room. An effort has been made to permit the students to do more in the way of actual administration of anesthesia under the close supervision of a member of the staff. It is hoped that in the following year with the allotment of more time for this activity by the curriculum committee, a more complete program utilizing the facilities at the affiliated hospitals may be implemented.

DEPARTMENT OF MEDICINE

A. *Personnel*

Faculty members of the Department of Medicine not listed in sub-specialty divisions are recorded in this section.

Theodore E. Woodward	Professor of Medicine and Head of the Department
Howard M. Bubert	Associate Professor of Medicine
T. Nelson Carey	Professor of Clinical Medicine
Douglass G. Carrol	Assistant Professor of Medicine
Francis P. Chinard	Assistant Professor of Medicine
Thomas B. Connor	Assistant Professor of Medicine
Edward F. Cotter	Associate Professor of Medicine
Ernest Cross, Jr.	Associate in Neurology
John S. Eastland	Instructor in Medicine
Bennett L. Elisberg	Associate Professor of Medicine
Patricia A. Elisberg	Instructor in Experimental Medicine
William L. Fearing	Assistant Instructor in Experimental Medicine
Maurice Feldman, Jr.	Associate in Neurology
Wetherbee Fort	Instructor in Medicine
Irving Freeman	Assistant Professor of Medicine
Frank J. Geraghty	Associate in Medicine
Marvin Goldstein	Assistant Professor of Medicine
William H. Grenzer	Instructor in Medicine
Samuel J. Hankin	Assistant in Medicine
W. Grafton Hersperger	Instructor in Medicine
Henry W. J. Holljes	Associate in Medicine
Meyer W. Jacobson	Associate in Medicine
Edward S. Kallins	Assistant Professor of Medicine
William H. Kammer, Jr.	Instructor in Medicine
Arthur Karfgin	Instructor in Medicine
James R. Karns	Associate in Medicine
Frank T. Kasik, Jr.	Assistant Professor of Medicine and Head, Student Health Service
Irvin B. Kemick	Assistant in Medicine
Joseph D. King	Instructor in Medicine
David M. Kipnis	Instructor in Medicine
Crawford N. Kirkpatrick, Jr.	Associate in Medicine
Louis A. M. Krause	Instructor in Medicine
Harry V. Langeluttig	Professor of Clinical Medicine
Franklin E. Leslie	Associate Professor of Medicine
Manuel Levin	Instructor in Medicine
	Instructor in Medicine

Ephraim T. Lisansky	Associate Professor of Medicine
Leonard Lister	Instructor in Medicine
S. J. Liu	Instructor in Medicine (leave of absence)
Robert J. Lyden	Assistant in Medicine
Barbara A. Lyons	Junior Instructor in Medicine
John MacGibbon	Assistant in Medicine
Stephen L. Magness	Assistant in Medicine
James T. Marsh	Lecturer in Medicine
Joseph C. Matchar	Instructor in Medicine
George McLean	Assistant Professor of Medicine
Ross McLean	Assistant Professor of Medicine
George S. Mirick	Assistant Professor of Medicine
S. Edwin Muller	Assistant Professor of Medicine
Joseph C. Myers	Assistant in Medicine
John C. Osborne	Instructor in Medicine
H. Raymond Peters	Professor of Clinical Medicine
Maurice C. Pincoffs	Professor of Medicine
J. Emmett Queen	Associate in Medicine
M. Kevin Quinn	Assistant in Medicine
Julian Reed	Instructor in Medicine
Donald J. Roop	Assistant in Medicine
Benjamin Rothfeld	Assistant in Medicine
Herman Schaerf	Assistant in Medicine
Adalbert Schubart	Assistant in Medicine
Harry B. Scott	Instructor in Medicine
Samuel Segall	Assistant in Medicine
Lawrence M. Serra	Assistant Professor of Medicine
Charles E. Shaw	Associate in Medicine
Jerome Sherman	Associate in Medicine
Margaret L. Sherrard	Assistant in Medicine
Solomon Smith	Assistant Professor of Medicine
William H. Smith	Associate Professor of Clinical Medicine
William C. Speed, III	Instructor in Medicine
William S. Spicer	Assistant in Medicine
Patrick B. Storey	Assistant Professor of Medicine
Stuart D. Sunday	Instructor in Medicine
Frederick J. Vollmer	Instructor in Medicine
Julius Waghelstein	Instructor in Medicine
Jack Wexler	Assistant in Medicine
Philip Whittlesey	Instructor in Medicine
John G. Wiswell	Assistant in Medicine
Thomas L. Worsley, Jr.	Assistant in Medicine

B. *Grants-in-Aid—1955-1957*

There are no specific grants-in-aid awarded to the department as such. The research and educational funds available to the department are shown in the respective subdivisions.

C. *Curricular Activities*

The sophomore course in physical diagnosis was improved during 1956-1957. Smaller tutorial groups permitted a few students and an instructor to emphasize the physical findings in normal subjects and in patients. The technique of history taking and case presentation at the bedside was stressed. Several stethotrons were provided by the Division of Cardiology which permitted demonstration of single lesions to four or five students simultaneously. Various audio-visual methods enabled the instructor to present cardiac abnormalities to the entire class.

Sixteen lectures on general medical subjects are presented to the junior class. The bulk of the junior teaching in medicine is a clinical clerkship with the student spending nine weeks on the medical wards working with an intern, resident and attending physician. Bedside instruction is emphasized and the student is encouraged to present case material and to use the laboratory as an aid to diagnosis. The Loch Raven Veterans Administration Hospital is utilized for the instruction in diseases of the chest with approximately one-third of the class spending three weeks for instruction in tuberculosis, emphysema, bronchiectasis and other disorders. A weekly conference conducted by members of the Departments of Pathology and Medicine emphasizes the pathologic and physiologic alterations of neurologic and general medical disorders.

The senior student spends approximately eight weeks in Medicine with four weeks as a clinical clerk on the wards of the University Hospital, Mercy Hospital and the Fort Howard Veterans Administration Hospital. Four additional weeks are spent in the Medical Out-patient Clinic where patients are observed and studied with appropriate supervision. In this clinic, a Home Care Program is conducted under the leadership of the General Practice Resident in Medicine and Head of the Medical Out-patient Clinic. The student attends patients with acute and chronic illnesses in the home. The student has the opportunity to experience home practice and to observe the social aspects of medicine. This aspect of instruction is correlated with the program of the Department of Preventive Medicine and Rehabilitation. The student physician attends the various sub-specialty clinics of medicine.

Summer fellowships have been encouraged for several years and during these months the student may work on the medical wards and participate in laboratory investigation. Student research has been encouraged.

D. *Research and Service Activities*

Research programs of the department have been described in the respective subdivisions. A brief summary of completed studies or work in progress will be presented in this section of the annual report.

A laboratory for investigation of the rheumatic diseases has been established in proximity to the arthritis clinic. This laboratory performs tests found useful for diagnosis

of the rheumatic group of diseases including the newer flocculation tests. The Arthritic Program is coordinated with the ward service of the University Hospital and the chronic disease hospital. The Arthritic Clinic participates in the instructional program of the Maryland Arthritis Foundation.

Radioactive iodinated serum albumin has been utilized to assay blood volume in patients with congestive heart failure of various types. Preliminary results reveal that the blood volume is increased. The Division of Cardiology has undertaken studies to determine levels of quinidine in patients. A simple test has been developed which permits reproducible results and provides reliable data for following patients who receive this cardiac drug.

The Infectious Disease Laboratory has been designated as a diagnostic center for the current influenza program. It provides diagnostic and research facilities for the Baltimore and Maryland area. Studies have been performed with the Asian flu vaccine dealing with the severity of reactions and antibody response to the vaccine. The side reactions to the Asian flu vaccine are of low order. Final evaluation of the vaccines efficacy is under study as a part of a nationwide program. The Department of Medicine as such is working in an advisory capacity with the Maryland State Health Department in connection with the State Control Program of Influenza. Diagnostic facilities for the identification of viral, rickettsial, and special bacterial agents are provided for the hospital and Maryland area. Tissue culture techniques are receiving major emphasis.

Cytologic methods have been utilized for the diagnosis of malignant diseases of the upper and lower gastro-intestinal tract. The Division of Gastro-enterology instituted the studies in 1954 as a part of a research program to appraise these methods for diagnosis of lesions of the lower gastro-intestinal tract. The technique has been very useful for confirmation of obvious colonic lesions and for detection of malignant lesions not otherwise apparent. The method, now standardized has been incorporated in the cytologic laboratory of the Department of Pathology.

Studies have been undertaken to clarify the etiology and pathogenesis of pyelonephritis with consideration given to a possible viral cause. Plans are underway to provide the hospital with dialysis apparatus for an artificial kidney and for a small biochemical laboratory. This activity is in collaboration with the Departments of Surgery and Pediatrics. Methods have been perfected for the detection of serotonin (5-hydroxytryptamine) in tissue fluids. A precursor of this metabolite has been shown to improve the electroencephalogram in patients with hepatic coma.

A ward has been established on the medical floor for concentration of patients with neurologic disorders. This ward permits correlative teaching of general medicine and neurology. Students and residents have been assigned to this ward which emphasizes general medicine and neurology. Investigations conducted by the Division of Neurology have revealed that transaminase is increased in the cerebrospinal fluid of patients with intracranial vascular lesions. A clinic for patients with multiple sclerosis was established in 1955. The census of this clinic is increasing gradually. Patients are admitted regularly to the medical ward for diagnostic work-up. A study designed to clarify the dynamics of the circulation of the spinal cord is in progress. Techniques have been perfected in animals and human application is contemplated. Present studies on bloody cerebro-

spinal fluid have defined the absorption curves of bile pigment spectrophotometrically. Studies have failed to reveal the origin of bile pigment in the spinal fluid.

The Division of Radioisotopes has acquired equipment for scanning the thyroid gland and for appraising size and location of glandular tissue. Isotopes have been used routinely for diagnostic, therapeutic, and investigative purposes utilizing radioactive I-131, gold and sodium chromate. Clinical studies performed in collaboration with the Departments of Pediatrics and Neuro-surgery show that radioisotopes are useful for localization of sub-dural collections of fluid in pediatric patients recovering from pyogenic meningitis. Radioactive gold has been shown to be of value in ameliorating the clinical course of patients with malignant effusions.

The hematologic section has conducted an active educational and investigative program. It has been reported that vitamin B-12 levels are elevated in patients with myeloid leukemia, the test finding some use in differential diagnosis. The problem of genetic relationships and abnormal hemaglobin formation is the subject of continued study. Much emphasis is being placed upon the inter-relationships of antigenic structure, globulins, abnormal proteins, and blood cell function.

A newly organized division of metabolism has emphasized thorough clinical work-up of patients with endocrinologic disorders. Studies related to calcium metabolism have been instituted as a part of a long term project.

A division for the teaching and study of pulmonary disease and respiratory function has been organized. Some effort will be directed toward clarifying the problems of mechanisms of resistance of the tubercule bacillus to the available anti-microbial agents. The problem of hypersensitivity and the host response to tuberculosis will be explored.

Physiologic studies on the function of the lesser circulation have been conducted by Dr. Greisman working in collaboration with Dr. Wisseman, Head of the Department of Microbiology.

A laboratory for identification of mycotic agents has been established as a part of the Dermatology Clinic. This facility has enhanced the diagnosis of disorders of the skin caused by fungi and a study revealed that *candida albicans* is increased above normal in the intestinal tract of patients who receive antibiotics. Clinical studies have demonstrated that anti-microbial drugs and steroids are effective in skin diseases of varied etiology. The importance of understanding the skin manifestations of systemic diseases as an aid to proper diagnosis has been emphasized.

Residents in medicine have been active in clinical and laboratory research, working within various divisions of the department. Salmonella infections of the central nervous system have been the subject of one report with stress laid upon the need for operative removal of infected foci as a supplemental aid to antibiotic treatment. Other studies by house officers have been concerned with conduction abnormalities in patients with cardiac disease. Problems of carbohydrate metabolism, mechanism of action of insulin and galactose tolerance studies have been undertaken in collaboration with the Division of Biochemistry of the Department of Pediatrics.

PUBLICATIONS

Other bibliography shown in reports of respective sub-divisions of department. *Publications*—July 1, 1955-June 30, 1957.

- WOODWARD, T. E.: Clues to better understanding of the nature and treatment of certain infectious diseases. *Am. J. Med. Sci.*, **231**: 369, 1956.
- MCCRUMB, F. R., JR.; STOCKARD, JOE L. and WOODWARD, T. E.: Leptospirosis as a major cause of short term pyrexia in a tropical environment, *Trans. Assoc. Am. Phys.*, **69**: 122, 1956.
- MCCRUMB, F. R., JR.; SNYDER, M. J. and WOODWARD, T. E.: Studies on human infection with *Pasteurella tularensis*. I. Comparison of streptomycin and chloramphenicol in the prophylaxis of clinical disease, *Trans. Assoc. Am. Phys.*, in press.
- WOODWARD, T. E. and SMADEL, J. E.: Chapter. Rickettsial diseases of man, *Harrison's Principles of Internal Medicine*. Blakiston, 2nd Edition.
- WOODWARD, T. E.: Chapter. Leptospirosis, *Meakins' Practice of Medicine*, Mosby, Sixth Edition.
- WISWELL, J. G.: The metabolic activity in vitro of some analogues of thyroxine, *Am. J. Physiol.* **182**: 301, 1955.
- ASPER, S. P., JR. and WISWELL, J. G.: Physiology and treatment of myxedema, *Am. J. Med.*, **20**: 732, 1956.
- WISWELL, J. G. and BRAVERMAN, M. G.: The effects of thyroxine and certain metal ions upon oxidation and phosphorylation in vitro, *Endocrinology*, 1957, in press.
- THOMAS, W. C.; WISWELL, J. G.; CONNOR, T. B. and HOWARD, J. E.: Hypercalcemic crisis due to hyperparathyroidism, *Am. J. Med.*, 1957, in press.
- GREISMAN, SHELDON: Capillary observations in patients with hemorrhagic fever and other infectious diseases. *J. Clin. Invest.*, June, 1957.
- ESMOND, W. G.; QUINN, C. and PETERS, H. R.: Hereditary spherocytosis in a Negro family, *Am. J. Dis. of Children*, **90**: 407-410, October, 1955.
- PETERS, H. R.: The Department of Medicine at Mercy Hospital, *Md. State Med. J.*, **6**: 3, March, 1957.
- ENSOR, R. E. and PETERS, H. R.: Experience with the anticoagulant, Marcumar, *Ann. Int. Med.*, May, 1957.
- BESSMAN, S. P.; SHEAR, S. and FITZGERALD, J. C.: Effect of arginine and glutamate on the removal of ammonia from the blood in normal and cirrhotic patients, *New Eng. J. Med.* **256**: 941-943, 1956.
- FITZGERALD, J. C.; SNYDER, M. J. and SINGLETON, R. T.: *Cholerae meningitis* an unusual case with cure following surgical excision, *Submitted Ann. Int. Med.*, 1957.
- FORT, WETHERBEE: Constipation and the internist, *Md. State Med. J.*, June 1955.
- MARRIOTT, H. J.; SCHUBART, A. and GORTEN, R.: Isorhythmic dissociation, *Am. J. Med.*, 1957, in press.
- BESSMAN, S. P. and STAUFFER, J. C.: Factors affecting the appearance of ammonia in the gastric juice, *J. Clin. Invest.*, **36**: 874, 1957.
- STAUFFER, J. C. and BELDING, H. SCRIBNER: Ammonium intoxication during treatment of alkalosis in a patient with normal liver function, *Am. J. Med.*, to be published.

EDUCATIONAL ACTIVITIES

February 7, 1957	Lisansky, E.	Management of Psychosomatic Division, Kecoughatan Veterans Hospital, Newport News, Virginia
April 1, 1957	Lisansky, E.	Comprehensive Evaluation of Medical Problems, Wilmington Veterans Hospital Facility, Wilmington, Delaware

November 29, 1956	Lisansky, E.	Medical, Psychiatric and Psychologic Teamwork in the Evaluation of Medical Problems, Fort Howard Veterans Hospital, Baltimore, Maryland
April 8, 1957	Lisansky, E.	Psychosomatic Evaluation and Management of Medical Problems, North Virginia Clinical Assembly, Alexandria, Virginia
November 18, 1956	Lisansky, E.	Anorexia Nervosa, Case Reports with Differential Diagnosis and Management, Medical Research Club of Baltimore
May 9, 1957	Lisansky, E.	Comprehensive Medicine, York County Medical Society, York, Pennsylvania
June 8, 1956	Wiswell, J. G., and Asper, S. P., Jr.	The Metabolic Activity in Vitro and in Vivo of the Acetic Acid Analogues of Thyroxine, Talk delivered at the Meeting of the Endocrine Society, Chicago
Fall of 1955	Greisman, Sheldon	Capillary Alterations in Hemorrhagic Fever, Johns Hopkins University, School of Medicine, (Regional Meeting of the American College of Physicians)
March 7, 1957	Townshend, W. H., Jr.	Problems in Staphylococcal Infections, Howard County Medical Society
October, 1956	Gundry, Lewis	Talk on Treatment of Diabetes, Exchange Club of Highlandtown
February, 1956	Gundry, Lewis	Talk on Tranquilizing Drugs, Howard County Medical Society
April, 1957	Gundry, Lewis	Short Broadcast on Guard Your Health Month
April 14, 1957	Peters, H. Raymond	The Use of Anticoagulants in Coronary Thrombosis, WBAL-TV
October 25, 1955	Peters, H. Raymond	Anticoagulant Therapy, Doctor's Hospital, Post-Graduate Institute
November 17, 1955	Krause, Louis	Geriatrics, Hopkins Physics Department, Levering Hall
January 2-6, 1956	Krause, Louis	Collagen Disease, Visiting Chief, Atlantic City Hospital

February 21, 1956	Krause, Louis	Peripheral Vascular Disease, Visiting Lecturer, University of North Carolina, Chapel Hill
April 7, 1956	Krause, Louis	Psychosomatic Medicine and Geriatrics, St. Frances General Hospital, Pittsburgh, Pa.
April 26, 1956	Krause, Louis	Ancient Medicine, New Jersey OB and GYN Society, West Point, N. Y.
November 7, 1956	Krause, Louis	Geriatrics, Delaware Association of General Practice, Wilmington, Delaware
November 13, 1956	Krause, Louis	Panel on Gastro-Enterology, Southern Medical Association
December 6, 1956	Krause, Louis	Psychosomatic Medicine, Eastern Panhandle Medical Society, Martinsburg, West Virginia
February 4-8, 1957	Krause, Louis	Peripheral Vascular Disease, Visiting Chief, Atlantic City Hospital
February 20, 1957	Krause, Louis	Psychosomatic Medicine, Eye, Ear, Nose & Throat Society, Reading, Pennsylvania
January 7, 1955	Fort, Wetherbee	The Hernia Problem, Medical Representative on a Panel Presented at the Baltimore City Medical Society
May, 1956	Fort, Wetherbee	Pitfalls of Pheochromocytoma, Lecture to the Staff of the Church Home and Hospital
May, 1957	Fort, Wetherbee	Hypertension and Nephritis, Lecture to the Staff of the Church Home and Hospital
January, 1957	Richardson, Aubrey D.	Recent Advances in Cardiac Diagnosis, An Address to the University of Maryland Nurses' Alumni Society
April & May, 1957	Richardson, Aubrey D.	A Seven Weeks Course in Electrocardiography for the Maryland General Hospital's House and Visiting Staff
June-July, 1955	Woodward, T. E.	Lecture tour to Japan and Manila

November 1, 1955	Woodward, T. E.	Clues to Better Understanding of the Nature & Treatment of Certain Infectious Diseases, Annual Meeting, American Clinical and Climatological Society, Hot Springs, Va.
November 22, 1955	Woodward, T. E.	Natural History of Louse Borne Epidemic Typhus Fever, Natural History of Diseases Lecture Series, Johns Hopkins School of Hygiene & Public Health
February 2, 1956	Woodward, T. E.	NRC Trauma Subcommittee Meeting to Consider Revision of Federal Civil Defense Emergency Treatment Manual, National Research Council, Washington, D. C.
February 16, 1956	Woodward, T. E.	Conference on Hemorrhagic Fever, National Institutes of Health, Bethesda, Maryland
March 1, 1956	Woodward, T. E.	Basic Considerations in Certain Infectious Disease Processes, Women's Medical Society of Maryland
March 2, 1956	Woodward, T. E.	Antibiotics—Their Use and Abuse, WMAR-TV—Baltimore City Medical Society
March 2, 1956	Woodward, T. E.	A Symposium on Uses and Abuses of Antibiotics, Symposium, Baltimore City Medical Society
April 11, 1956	Woodward, T. E.	Testimony for the Committee on Labor and Public Welfare, U. S. Senate on National Medical Library, Old Supreme Court Chamber at the Capitol, Washington, D. C.
May 24, 1956	Woodward, T. E.	Advantages and Limitations of Antibiotic Therapy, Allegany-Garrett County Medical Society, Fort Cumberland Hotel, Cumberland, Maryland
June 7, 1956	Woodward, T. E.	Commencement Address, Staff, Henry Ford Hospital, Detroit, Michigan

June 15, 1956	Woodward, T. E.	Lecture on Pathogenesis and Management of Infectious Diseases, Dartmouth Medical School and Veterans Administration Hospital, White River Junction, Vermont
June 20, 1956	Woodward, T. E.	(1) Diagnosis, Pathogenesis and Management of the Non-tuberculous Pneumonias; (2) Basic Considerations in Certain Infectious Disease Processes With Emphasis Upon Vascular Abnormalities, Trudeau Foundation, Post-Graduate Course, Saranac Lake, N. Y.
September 6, 1956	Woodward, T. E.	Commission of Epidemiological Survey, Department of Defense, Armed Forces Epidemiological Board, Washington, D. C.
October 17, 1956	Woodward, T. E.	Practical Aspects of Diagnosis, Nature and Management of Acute Infections, Maryland Academy of General Practice, Sheraton-Belvedere Hotel, Baltimore, Maryland
October 26, 1956	Woodward, T. E.	Therapy of Infections, New York Academy of Medicine, New York, N. Y.
November 1, 2, 3, 1956	Woodward, T. E.	Panel Discussion on Pathogenesis of Typhoid Fever, American Clinical and Climatological Association, Skytop, Pennsylvania
November 7, 1956	Woodward, T. E.	Infectious Diseases: Basic Considerations with Respect to their Pathogenesis, Diagnosis and Management, Seventh Scientific Assembly, Academy of General Practice, Garden City Hotel, Valley Stream, N. Y.
November 12, 1956	Woodward, T. E.	Antibiotic Therapy, Practical Aspects and Basic Considerations, Southern Medical Association Meeting, Washington, D. C.
December 6, 1956	Woodward, T. E.	Clinical Discussion of Pneumonia, Baltimore City Hospitals, Baltimore, Maryland

February 14, 1957	Woodward, T. E.	Basic and Practical Considerations in the Pathogenesis and Management of Certain Infectious Diseases, The Delaware Hospital, Wilmington, Delaware
March 18, 1957	Woodward, T. E.	Practical Aspects of Anti-Microbial Therapy: Artificial vs. Natural Methods, Hartford Hospital, Hartford, Connecticut
April 1, 1957	Woodward, T. E.	Influence of Antibiotics on Immune Status, American Academy of Pediatrics, Washington, D. C.
April 25, 1957	Woodward, T. E.	The Clinical Aspects of Human Leptospirosis, Symposium on Leptospirosis, University of Kansas, Medical Center, Kansas City, Kansas
May 16, 1957	Woodward, T. E.	The Problem of Getting Well From Infectious Diseases, Veterans Administration Hospital and University of Syracuse, Syracuse, N. Y.
March, 1957	Stauffer, J. C.	Consciousness and the Chemical Environment of the Brain, Participation in 25th Ross Pediatric Research Symposium, Baltimore, Md.

DIVISION OF ARTHRITIS

A. *Personnel:*

Marriott, Henry J. L., M.D.	Associate Professor of Medicine and Head of Division
Kochman, Leon A., M.D. and Staff.	Director of Arthritis Clinic, OPD

B. *Grants-in-aid:*

a. Public Health Service	\$7,020.00
b. Arthritis & Rheumatism Foundation	5,000.00

C. *Curricular Activities:*

1. Outpatient instruction to assigned 4th year students.
2. Weekly seminars in rheumatic disease for assigned 4th year students.
3. Weekly consultative ward rounds.
4. Participation in seminars, departmental and inter-departmental.

D. *Research Activities:*

Pilot study on relation of blood groups to arthritic diseases.

E. *Publications:*

None.

F. *Educational Activities:*

April 1947—Dr. Kochman conducted seminar for nurses at the Hospital for the Women of Maryland on the care of the arthritic patient.

G. *Needs of the Division:*

None.

DIVISION OF CARDIOLOGY

A. *Personnel*

Leonard Scherlis, M.D.	Chief, Division of Cardiology
	Assistant Professor of Medicine
William S. Love, M.D.	Professor of Clinical Medicine
C. Edward Leach, M.D.	Assistant Professor of Medicine
	Chief, Adult Cardiology Outpatient Clinic
Sidney Scherlis, M.D.	Assistant Professor of Medicine
	Chief, Pediatric Cardiology Outpatient Clinic
Wilfred H. Townshend, M.D.	Associate in Medicine
Stephen J. VanLill, III, M.D.	Associate in Medicine
Kyle Y. Swisher, M.D.	Associate in Medicine
Aubrey Richardson, M.D.	Instructor in Medicine
Robert T. Singleton, M.D.	Trainee in Cardiology
Luis F. Gonzalez, M.D.	Trainee in Cardiology

B. *Grants-in-aid—1956-1957*

Source:	Amount	Title
National Heart Institute	\$25,000.00	Cardiovascular Training Grant
U. S. Public Health Service	11,500.00	Studies in Blood Volume and Blood Cell Mass
National Heart Institute	4,100.00	Traineeship in Cardiology

C. *Curricular Activities*

The Division of Cardiology is responsible for the laboratory instruction in the physiology course devoted to the electrical activity of the heart. In addition, a lecture on electro-physiology and electrocardiology is given. That portion of the physical diagnosis course devoted to the cardiovascular system is given by the Division of Cardiology to the sophomore class. The junior class receives several formal lectures in cardiology and five informal clinics and conferences. They are consigned to hospital wards where they are in contact with consultants in cardiology. There are weekly ward rounds with the seniors on cardiology problems. They rotate through the adult and pediatric cardiac clinics where conferences are held. An elective course in electrocardiography is given which is attended by an average of seventy-five students and house-staff. Two students, usually seniors, are appointed as Summer Fellows in the Division of Cardiology participating in active investigation and receiving clinical instruction.

D. *Research Activities*

1. Studies in Blood Volume and Red Cell Mass. This study is supported by the National Heart Institute.
2. Neurogenic Aspects of Coronary Artery Disease. This is supported by a Grant from the Maryland Heart Association given in 1955.
3. Quinidine Metabolism and Tissue Gradient Studies. A preliminary study was started and support has been received for the coming year from the Maryland Heart Association.
4. An evaluation of Spatial Vectorcardiography in the Diagnosis of Myocardial Infarction. A general evaluation of this electrocardiographic technique.
5. The Division has continued to perform the cardiac catheterizations for diagnostic and investigational purposes.

E. *Publications*—July 1, 1955 to June 30, 1957

- SCHERLIS, S. and COWLEY, R. A.: Experimental and clinical observations of neurogenic factors in coronary artery disease, *Surgery*, **38**: 835, 1955.
- SCHERLIS, S.: Experimental findings and clinical results of selective vagotomy. (Abstract) *Circulation*, **12**: 770, 1955.
- SCHERLIS, L.; COWLEY, R. A.; RICHARDSON, A.; ADAMS, C. and LOVE, W. S.: The spatial vectorcardiogram and electrocardiogram in mitral and aortic valvular disease. (Abstract) *Circulation*, **12**: 770, 1955.
- COWLEY, R. A.; SCHERLIS, L. and HACKETT, P.: The evaluation and care of the patient for surgery, *The American Surgeon*, **21**: 242, 1955.
- SCHERLIS, L. and COWLEY, R. A.: The Lutembacher Syndrome: A physiologic study and case report, *Annals of Internal Medicine*, **43**: 575, 1955.
- SCHERLIS, L.: Spatial vectorcardiography, *Modern Medicine*, p. 172, 1957.

F. *Lectures and Conferences Conducted by Members of the Division*

July 1, 1956 to June 30, 1957

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| January 3, 1957 | Scherlis, L., St. Agnes Hospital. "Pericarditis." |
| March 5, 1957 | Scherlis, L., Combined Anesthesia Conferences of Baltimore. "The Surgical Patient with Heart Disease." |
| March 13, 1957 | Scherlis, L., Loch Raven Veterans Hospital. "Interatrial Septal Defects." |
| April 16, 1957 | Scherlis, L., Maryland General Hospital. "Pericarditis." |
| May 15, 1957 | Scherlis, L., American College of Cardiology, Washington, D. C. "Seminar on Electrocardiography and Vectrocardiography." |
| May 16, 1957 | Scherlis, L., American College of Cardiology, Washington, D. C. "Spatial Vectorcardiography as a Diagnostic Aid in Myocardial Infarction." |
| May 17, 1957 | Scherlis, L., Provident Hospital, House Officers Association. "Cardiac Catheterization." |
| June 13, 1957 | Scherlis, L., Mercy Hospital Post-Graduate Course. "Myocardial Infarction." |
| September 26, 1956 | Scherlis, L., Delaware Academy of General Practice. "Basic Physiology as applied to Cardiovascular Diseases." |

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| October 1, 1956 | Swisher, K. Y., Alumni Association of Church Home. "Curable Forms of Heart Disease." |
| October 18, 1956 | Swisher, K. Y., St. Agnes Hospital. "Cor Pulmonale: Pathogenesis, Diagnosis and Treatment." |
| Feb. 19-April '57 | Richardson, A., Maryland General Hospital. "Weekly Course in Electrocardiography." |
| May 8, 1957 | Scherlis, L., Anne Arundel County Med. Soc. & U. S. Naval Hospital, Annapolis, Md. "Referring Cardiac Patients." |
| <i>Non-Scientific Papers Delivered</i> | |
| February 22, 1957 | Scherlis, L.; Richardson, A.; Swisher, K., Maryland Heart Association, WMAR-TV. "Help Your Heart." |
| February 28, 1957 | Scherlis, L., WAAM-TV. "New Hope for the Young Heart." |
| January 23, 1957 | Richardson, A., Baltimore Talmudical Society. "Recent Advances in Diagnosis and Treatment of Heart Disease." |
| October 5, 1956 | Swisher, K., Woman's Civic League of Baltimore. "Recent Advances in Diagnosis and Treatment of Heart Disease." |
| August 27, 1956 | Scherlis, L., Doefield Democratic Club. "Recent Advances in Cardiovascular Disease." |
| November, 1956 | Scherlis, L., Chizuk Amuno Brotherhood. "You and Your Heart." |
| October 16, 1956 | Scherlis, L., Golden Age Club. "Heart Disease." |
| November 14, 1956 | Scherlis, L., Rotary Club of Catonsville. "Recent Advances in Cardiac Disease." |
| May 22, 1957 | Scherlis, L., Frederick County Heart Association. "The Maryland Heart Association." |

G. *Scientific Exhibits*

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| October 18, 1956 | Scherlis, L., Maryland Heart Association, Post-graduate Seminar in Cardiology. "Electrocardiography as an aid in the evaluation of cardiovascular disease." |
| October 18, 1956 | Scherlis, S., Maryland Heart Association, Post-graduate Seminar in Cardiology. "Coronary Artery Disease." |

H. *Committees*

The members of the Division of Cardiology have been active in the Maryland Heart Association. Dr. Sidney Scherlis is a member of the Medical Advisory Board and is Chairman of the Lay Education Committee. Dr. Leonard Scherlis is Chairman of the Community Services Committee, serves as a member of the Research Committee, and is a member of the Board of Trustees. Dr. Aubrey Richardson is a member of the Community Services Committee, and Dr. Kyle Swisher is a member of the Professional Education Committee. During the past year, grants were received for research projects to be initiated July 1, 1957 and support has been secured for a Fellow in the Division of Cardiology from the Maryland Heart Association.

I. Clinic Areas

The Division of Cardiology is active in the Adult and Pediatric Cardiology Clinic. Members of the Division help in the instruction of students and hold weekly conferences in these clinics. The clinic areas include facilities for both electrocardiograms and fluoroscopic examination and evaluation. Approximately 1,620 patients were seen from July 1, 1956 to June 30, 1957.

J. Recommendations

Space: The present space occupied by the Division of Cardiology is inadequate. The personnel which is active in the Division has insufficient space for the recording of electrocardiograms, sound tracings, and routine patient consultations. Projects already approved and underway, require laboratory space which is not presently available. There is a present urgent need for an additional office, consultation room, and laboratory.

The routine electrocardiograms are recorded for the hospital in an area which is now overcrowded and inadequate. With the personnel also increased to include assistant residents, rotating through specialty services and assistant residents from Church Home and Maryland General, the space problem becomes further acute.

Equipment: At the present time, there is no specific need for electrocardiographic equipment. The present and proposed Grants-In-Aid should be sufficient for the contemplated equipment needs of the division.

Personnel: The increased routine and investigational work of the division requires the services of another non-professional member of the staff. A technician-secretary is required in order to keep the files and records available and to record and mount electrocardiograms for teaching purposes.

The present medical stenographer is funded from the teaching grant of the United States Public Health Service. Her work load has so increased that she is barely able to keep up with the routine work of the division.

Teaching Load: It is contemplated that the teaching load of the division will be increased. This is not only along the student level but along the house-staff level as well. Walking cardiac rounds are to be held regularly. It is planned by the division to have a weekly cardiology conference, to which will be invited interested members of other divisions. Permission has been secured for a post-graduate electrocardiographic course and it is hoped that this will be inaugurated during the coming year and possibly expanded into the Cardiology Post-graduate Courses as well. During the past year, assistant residents from Maryland General and Church Home participated in the activities of the division. It is assumed that this will probably continue and possibly be expanded. This increased teaching load may require additional professional personnel.

DIVISION OF CLINICAL PATHOLOGY

July 1, 1955-June 30, 1957

I. Personnel:

Dr. Milton S. Sacks, Professor of Clinical Medicine and Head of Division

Dr. Marie A. Andersch, Associate Professor of Biochemistry in Medicine

Dr. Carroll L. Spurling, Assistant Professor of Medicine
Dr. Charles L. Wisseman (part-time), Professor of Microbiology
Dr. Alice M. Band (deceased June 9, 1957), Associate in Medicine
Dr. W. W. Schier (part-time), Assistant Professor of Medicine
Dr. John B. DeHoff (part-time), Associate in Medicine
Dr. Benjamin Rothfeld (part-time), Assistant in Medicine
Dr. Stanley Miller (part-time), Associate in Medicine
Dr. Sherwood Miller, Baltimore Rh Laboratory Fellow in Medicine
(July 1, 1955-June 30, 1957)

Dr. Howard Cohn, Baltimore Rh Laboratory Fellow in Medicine (July 1, 1957)
Dr. Elias Guttman, Baltimore Rh Laboratory Fellow in Medicine (July 1, 1957)
Elsa F. Jahn, B.S., Research Associate in Clinical Pathology
Jason M. Masters, M.S., Instructor in Medicine
Audrey Funk, B.A., Assistant in Medicine

Adam Szczypinski, Laboratory Technician I
Lenore A. Schwartz, Laboratory Technician I
Genevieve M. Clement, Laboratory Technician I
Emily Boyle, Laboratory Technician I
Lorraine D. Gordon, Laboratory Technician I
Mary E. Lochte, Laboratory Technician I
Eleanor S. Flagg, Laboratory Technician I
Kathryn Dorsey, Laboratory Technician I
Kathleen A. O'Connor, Laboratory Technician I
Ann L. Gilbert, Laboratory Technician I
Doris L. McKay, Laboratory Technician I
Lois L'lene Fifer, Laboratory Technician II
Marie A. Check, Laboratory Technician II
Velma E. Days, Laboratory Technician II
Rosa E. Tavera, Laboratory Technician II
Mary E. James, Laboratory Technician II
Shirley H. Simon, Laboratory Technician II
Mary E. Arnsworthy, Laboratory Technician II

Cecelia Castillo, Laboratory Technician II
Enrica S. Tantoco, Laboratory Technician II
Hannah N. Allman, Laboratory Assistant
Julianna R. Glaeser, Laboratory Assistant
Janice M. Bona, Laboratory Assistant
Eleanor Plewacki, Laboratory Assistant
Suzanne M. Mlynarczyk, Laboratory Assistant
Mary Meeks, Laboratory Assistant
Mary Larrieh, Laboratory Assistant
Katherine Roelke, Laboratory Assistant
Zada K. Stouffer, Medical Stenographer
Janice S. Schwartz, Senior Typist
Livia Freyman, Junior Typist
Richard Babb, Laboratory Helper
Margaret Nichols, Laboratory Helper
Minyon Kelly, Service Worker
Zuleen McCaskill, Service Worker

II. Statistical Summary of Work:

	Jan. 1, 1955-Jan. 1, 1956	Jan. 1, 1956-Jan. 1, 1957
Bacteriology	32,033	36,136
Biochemistry	80,852	84,072
Blood Bank	60,547	58,325
Coagulation Laboratory	767 (2 mos. operation)	6,165
Hematology	80,801	84,248
OPD Laboratory	56,111	64,592
Serology	28,172	31,817
Urinalysis Laboratory	81,639	91,549
	420,922	457,840
Percentage increase in volume of work—1955-1956.....		8.7%
Percentage increase in volume of work—1950-1956.....		86.5%

III. *New diagnostic procedures introduced:*

Serum transaminase
Hemoglobin electrophoresis
Serum electrophoresis
Serum Iron
Iron-binding capacity
Serum copper
Protein bound iodine
C—reactive protein
Thromboplastin Generation Test
Prothrombin Consumption Test
Electronic computation of red cells and white cells

IV. *Curricular Activities:*

- a. Clinical Pathology—sophomore class—128 hours
- b. Advanced Clinical Pathology—junior class—36 hours
- c. Hematology conferences—senior class—32 hours
- d. General Medicine (lectures, clinics)—junior class—5 hours
- e. Hematology staff rounds (house staff consultation)—2 hours per week—12 months
- f. Proportional participation—weekly grand rounds in Medicine (Tuesday noon conferences)
- g. Proportional participation—Saturday morning—inter-departmental seminars
- h. Participation in Basic Science program of Department of Obstetrics—Gynecology—12 hours—junior class
- i. Participation—Basic Science program of Post Graduate Committee.

V. *Grants-in-Aid:*

- a. Maryland Division, American Cancer Society—\$4,300.00—Leukemia Research.
- b. Ayerst Laboratories—\$7,500.00—Iron Metabolism
- c. Anna Corman Memorial Fund—\$3,000.00—research fellowship
- d. Baltimore Rh Laboratory—\$15,000.00—General Hematology Research Fund
- e. Baltimore Rh Laboratory—\$6,500.00—support of two fellowships

VI. *Research Activities:*

a. *Vitamin B₁₂ blood levels in leukemia and allied diseases*—the *Euglena gracilis* var. Z microbiologic assay technique is being employed. High blood levels of the vitamin have been found in chronic myeloid leukemia which seems to be related to an increased binding-capacity of an alpha globulin in this disease. The results of this study are in press (J. Lab. & Clin. Med.) at the time this report was prepared. Further studies are contemplated.

b. *Immunologic studies in Hodgkin's disease*—patients with Hodgkin's disease show a lack of reactivity to tuberculin. Attempts to transfer tuberculin sensitivity by means of concentrated leukocyte suspensions from tuberculin positive individuals to patients

with Hodgkin's disease are being made. In this manner it is hoped we can explore the tissue reactivity of patients with this disease.

c. *Cooperative Chemotherapy Program in Acute Leukemia*—We are cooperating with a chemotherapy panel consisting of representatives from the National Cancer Institute, Walter Reed Hospital, Roswell Park Memorial Institute, Duke Hospital, Jefferson Hospital in studying new agents in the management of Acute Leukemia. The drug currently being studied is 6-Azauracil.

d. *Antigenic Content of human leukocytes*—Normal leukocytes have been found to react with anti-A and anti-B agglutinins. The probable presence of the antigens A and B in leukocytes must be taken into consideration when examining sera in the search for immune leukoagglutinins. A paper on these studies is in preparation at the time of preparing this report.

e. *Starch gel electrophoresis of plasma proteins*—recent reports indicate that there are genetic differences in human plasma proteins. The techniques for this type of study are being set up at present.

f. *The Nature of the Red Cell Defect in Paroxysmal Nocturnal Hemoglobinuria*—in vitro inhibition of the Ham (Acid Hemolysis) test by alpha tocopherol has been observed. Studies are in progress to determine whether similar reversal occurs after the administration of alpha tocopherol in vivo.

VII. *Publications—July 1, 1955-June 30, 1957:*

1. SACKS, MILTON; RACCUGLIA, G.: Hereditary Deficiency of Proaccelerin (Parahemophilia): A Family Study, *J. Lab. & Clin. Med.*, **46**: **98**: 1955.
2. SACKS, MILTON S.: Fibrinogen Deficiency, *Ann. Int. Med.*, **43**: **1139**: 1955.
3. ANDERSCH, MARIE A.: A titration Method for the Determination of Calcium in Serum using a New Indicator, *J. Lab. & Clin. Med.*, **49**: **486**: 1957.
4. RACCUGLIA, G.; SACKS, MILTON S.: Vitamin B₁₂ Binding Capacity of Normal and Leukemic Sera, *J. Lab. & Clin. Med.*, **50**: **69**: 1957.

VIII. *Educational Activities—July 1, 1955-June 30, 1957:*

1. October 4, 1955 Sacks, Milton S.: Medical Research Club. "Fibrinogen Deficiency."
2. October 20, 1955 Sacks, Milton S.: York County (Pa.) Medical Society. "Recent Developments in the Diagnosis and Management of Hemorrhagic Diathesis."
3. October 25, 1955 Sacks, Milton S.: Post Graduate Institute, Doctor's Hospital. "Recent Advances in Knowledge of Blood Coagulation."
4. Nov. 4, 11, 18, 1955 Sacks, Milton S.; Spurling, Carroll L.: Medical Staff Conferences, Provident Hospital. "Lymphoma, Anemias, Hemoglobinopathies."
5. November 17, 1955 Sacks, Milton S.: Baltimore City Medical Society, General Practice Section. "Some Aspects of Iron Metabolism."
6. November 19, 1955 Sacks, Milton S.; Raccuglia, G.: Regional Meeting, American College of Physicians, Baltimore. "Serum Vitamin B₁₂ Levels in Leukemia."

7. December 2, 1955 Band, Alice M.; Sacks, Milton S.: American Medical Association, Clinical Meeting, Boston, Mass. "The Management of Idiopathic Thrombocytopenic Purpura."
8. December 14, 1955 Sacks, Milton S.: Joint Staff Conference, Obstetrics and Pediatrics, Union Memorial Hospital. "The Rh Problem."
9. January 9, 16, 1956 Sacks, Milton S.: Johns Hopkins University School of Medicine, Junior Class. "Blood Group Isoimmunization."
10. January 11, 1956 Sacks, Milton S.: Union Memorial Hospital, Medical Meeting. "Management of Leukemia."
11. January 26, 1956 Sacks, Milton S.: Sinai Hospital Staff Meeting. "The Physiology of Blood Clotting and its disorders" (Panel discussion).
12. January 26,
February 2,
February 9, 1956 Sacks, Milton S.; Spurling, Carroll L.: St. Agnes Hospital, Medical Programs. "Lymphoma, Anemia, Collagen Diseases."
13. February 6, 1956 Sacks, Milton S.: Baltimore City Dental Assistants Society. "Genetic Factors in Disease."
14. March 16, 1956 Sacks, Milton S.; Spurling, Carroll L.: Maryland State Department of Health. "Workshop on Blood Grouping and Allied Subjects."
15. March 19, 1956 Sacks, Milton S.: Baltimore City Medical Society, Dermatology Section. "Gamma Globulin and its Relation to Skin Diseases."
16. March 21, 1956 Sacks, Milton S.: Post Graduate Seminar, Department of Neurology, Neuro-Pathology, Neurosurgery, University of Maryland. "The Diagnosis of Disseminated Lupus Erythematosus."
17. April 4, 1956 Sacks, Milton S.: Catholic Hospital Association of the United States and Canada, Blood Bank Workshop, Georgetown University, Washington, D. C. "Miscellaneous Blood Groups and Their Aspects in Blood Transfusion."
18. April 19, 1956 Sacks, Milton S.: U. S. Naval Hospital, Bainbridge, Maryland, Staff Meeting. "New Red Cell Antigens."
19. April 28, 1956 Sacks, Milton S.: Medical Association of Lutheran Hospital, Annual Meeting. Discussion of paper by Dr. Leandro M. Tocantins on "Fundamental and Clinical Aspects of Hemophilia."
20. May 29, 1956 Sacks, Milton S.: Church Home and Hospital. "Granulomatous Diseases."
21. October 10, 1956 Sacks, Milton S.: Union Memorial Hospital, Obstetrical Staff Conference. "The Rh Factor."

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| 22. October 17, 1956 | Sacks, Milton S.: Delaware Academy of General Practice, Wilmington, Delaware. "Common Blood Dyscrasias: Diagnosis and Management." |
| 23. November 2, 1956 | Sacks, Milton S.: Baltimore City Medical Society. "Hemorrhagic Disorders" (Panel Discussion). |
| 24. November 7, 1956 | Sacks, Milton S.: Union Memorial Hospital, Medical Staff Conference. "Drug Induced Blood Dyscrasias." |
| 25. Dec. 10, 17, 1956 | Sacks, Milton S.: Johns Hopkins University School of Medicine, Junior Class. "Blood Group Isoimmunization." |
| 26. December 13, 1956 | Sacks, Milton S.: Maryland Academy of General Practice (Post Graduate Committee). "Blood Diseases." |
| 27. February 27, 1957 | Sacks, Milton S.: St. Agnes Hospital, Obstetrical Staff Meeting. "The Rh Factor." |
| 28. March 13, 1957 | Sacks, Milton S.: Eastern Panhandle Medical Society (West Virginia). "Recent Developments in the Study of Hemorrhagic Diseases." |
| 29. April 23, 1957 | Sacks, Milton S.: Bon Secours Hospital, Staff Meeting. "Afibrinogenemia." |

IX. Space:

The space of the Division of Clinical Pathology is hopelessly inadequate. We have continued to point this out in our annual budgetary requests in recent years. This view has now also been endorsed by the recent report of Dr. Kenneth Babcock, Director of the Joint Commission on Accreditation of Hospitals (item No. 7, report of May 14, 1957). In 1935, the first full year of operation of the new University Hospital, approximately 65,000 tests were done. In 1956, 457,000 tests were done, an increase of approximately 700%! There has been no increase in the space of this division since 1935. We have now reached a point where many of our laboratories are so crowded with personnel that no further increases can be accommodated. It appears to us that this has now become an important limiting factor in the expansion of the patient load of the hospital. The probable establishment of a School of Medical Technology and the institution of a two year residency program in Clinical Pathology, in collaboration with the Department of Pathology, will still further aggravate this serious problem.

The present space allotted to the Division of Clinical Pathology in both the hospital and the out patient department is estimated to be between 5500 and 6000 square feet. Our need, based on estimated growth during the next 15-20 years is approximately 25,000 square feet.

The needs of one area of the Division are even more pressing than the overall picture. I refer to the Blood Bank. This is an important area of contact between the University Hospital and the general public. Approximately 7500 blood donors are drawn yearly in this area. Our facilities will not permit proper processing of the blood. We have always maintained a high reputation in this field and it is distressing to contemplate any deterioration for lack of adequate physical facilities.

DIVISION OF DERMATOLOGY

A. *Personnel*

Harry M. Robinson, Jr., B.S., M.D.	Professor of Dermatology Head of the Division of Dermatology
Francis A. Ellis, B.S., M.D.	Associate Professor of Dermatology Assistant Professor of Pathology, in charge of Dermal Pathology
Raymond C. V. Robinson, B.S., M.D.	Assistant Professor of Dermatology Assistant Chief of Dermatology Clinic
Eugene S. Bereston, A.B., M.D., D.Sc.	Assistant Professor of Dermatology
Albert Shapiro, M.D.	Assistant Professor of Dermatology
Mark B. Hollander, B.S., M.D.	Associate in Dermatology
William R. Bundick, M.D.	Associate in Dermatology
Stanley N. Yaffe, M.D.	Instructor in Dermatology
Morris M. Cohen, M.D.	Instructor in Dermatology
David Bacharach, M.D.	Instructor in Dermatology
John F. Strahan, M.D.	Instructor in Dermatology
Lee R. Lerman, M.D.	Assistant in Dermatology
Jacob Ludwig, M.D.	Assistant in Dermatology
Louis E. Harmon, M.D.	Fellow in Dermatology
Ken Hashimoto, M.D.	Assistant Resident in Dermatology

B. *Grants-In-Aid*

	<i>Amount</i>	<i>Title</i>
Upjohn Company	\$2,400.00	Research in Steroids
Chas. Pfizer Company	2,000.00	Research in Steroids
Merck, Sharp and Dohme Co.	3,000.00	Research in Steroids
Miss Paula Von Klein	500.00	A gift for dermatology education
The Duke Co.	500.00	A gift for dermatology education
Maltbie Laboratory	3,000.00	Research on fungicides
Parke, Davis Co.	2,000.00	Study on the value of Camoquin in Discoid Lupus Erythematosus

C. *Curricular Activity*

Members of the Division have participated in the teaching of dermatology to the junior and senior classes of the medical school. Daily rounds are made in the hospital by one of the senior staff members on all service consultations and private patients. Daily teaching is done in the out-patient department to groups of twelve senior students who are assigned to dermatology for a period of four weeks each. A two hour clinical session is held once weekly with one quarter of the junior class. This group rotates every nine weeks. The members of the division have participated in lectures to the house officers.

An active training program is conducted at the postgraduate level for residents and fellows in dermatology. The Division of Dermatology has been approved by the American Board of Dermatology for the three years of training required by that organization.

D. Research Activities

1. Clinical and laboratory evaluation of antibiotics in the treatment of acne vulgaris. Present studies in this division indicate that there is apparently no correlation by the tube dilution sensitivity tests and the antibiotic selected. Homeopathic doses appear to produce and retain improvement. Penicillin has proved to be of least value.
2. Studies are being conducted on the in vitro nutritional requirements of fungi. In the course of our present studies we have arrived at the quantitative requirements of vitamins and minerals as necessary additions to the culture media now in use.
3. Further studies are being conducted to determine the effect of dermatophytes on melanin. Present in vitro studies indicate definite interference with the tyrosin-tyrosinase reaction.
4. The mode of action of steroids applied topically is being studied in humans and lower animals. Further studies are contemplated using tagged compounds, serial biopsies, and the direct photographic technique. An attempt is being made to determine the retention of steroids in superficial tissue when applied topically.
5. The affinity of inorganic arsenic for keratin is under study. The paucity of clinical material will make this a long term project. An attempt is being made to prove or disprove claims made for the affinity of inorganic arsenic for keratin.
6. The relationship of cutaneous lesions to emotional stimuli is under study. Dr. Charles Betts of the Department of Psychiatry has been assigned to work with the Division of Dermatology. He is at present holding regular rounds with the members of the staff and trainees once weekly for two hours.
7. Studies on the epidemiology of microsporum audouini infection are being conducted. At present we have been able to prove the role of fomites in the spread of this contagious disease. We are attempting to prove or disprove the possibility of infecting lower animals. These studies are being conducted on hamsters, rabbits, and guinea pigs. At a later date it is hoped to also conduct studies on monkeys.
8. Clinical investigation on the role of tranquilizing drugs is still in progress. At present four different compounds are being used. This study has been an interesting one and in view of the number of placebo reactors, it has been difficult to evaluate.

E. Publications

1. ROBINSON, H. M., JR.: Prednisone and Prednisolone in the treatment of dematoses, First International Conference on the Clinical and Metabolic Effects of Meticorten and Meticortelone, New York City, June 1955.
2. ROBINSON, R. C. V.: Comparative study of ointment bases, A. M. A. Arch. Dermat. **72**: 54-58.
3. ZELIGMAN, ISRAEL: Cortisone therapy for pruritic pityriasis rosea. Bull. Sch. of Med., Univ. of Md., **40**: 76-77, July 1955.
4. ROBINSON, R. C. V.: Plastibase—A hydrocarbon gel ointment base. Bull. Sch. of Med., Univ. of Md., **40**: 86, July 1955.
5. ROBINSON, H. M., JR.; ROBINSON, R. C. V. and STRAHAN, J. F.; Indications for local hydrocortisone therapy. Medical Times, **83**: 227-237, 1955.

6. BERESTON, EUGENE S.: Hydrotherapeutic action of crude coal tar in selected dermatoses. *New York State Jour. of Med.*, **55**: 1724, 1955.
7. ROBINSON, H. M., JR.: Antibiotika und steroide in der dermatologischen praxis. *Die Therapiewoche*, **5**: 630 (1955).
8. ZELIGMAN, ISRAEL and ROBINSON, H. M., JR.: Liquid nitrogen therapy in dermatology. *Bull. Sch. of Med., Univ. of Md.*, **40**: 5, Oct. 1955.
9. ROBINSON, H. M., JR. and HOLLANDER, MARK. B.: Topical use of chlorquinaldol. *Jour. of Invest. Derm.*, **26**: 2, Feb. 1956.
10. ROBINSON, H. M., JR.; COHEN, MORRIS M.; ROBINSON, R. C. V. and BERESTON, EUGENE S.: Simplified office procedures for mycological diagnosis. *J. Am. Med. Asso.*, **150**: 537-540, Feb. 1956.
11. ROBINSON, H. M., JR.; ROBINSON, R. C. V. and STRAHAN, JOHN. F.: Antibioticsteroid combinations for topical use. *Antibiotics Annual*, **302**: 1955-1956.
12. ROBINSON, H. M., JR.; ROBINSON, R. C. V. and STRAHAN, JOHN F.: Hydroxyzine (Atarax) hydrochloride in dermatological therapy. *J. Am. Med. Asso.*, **161**: 604-606, June 1956.
13. ELLIS, FRANCIS A. and BUNDICK, W. R.: Cutaneous elasticity and hyperelasticity. *A. M. A. Arch. Derm.*, **74**: 22-32, 1956.
14. ROBINSON, R. C. V.; ROBINSON, H. M., JR. and STRAHAN, JOHN F.: Amodeoquin (camoquin) in discoid lupus erythematosus. *Bull. Sch. of Med., Univ. of Md.*, **42**: 14-16, Jan. 1957.
15. ROBINSON, R. C. V.: Nystatin in the treatment of cutaneous moniliasis. *Monographs on Therapy*, **2**: 55-59, Mar. 1957.
16. ROBINSON, R. C. V.: Moniliasis in infants. *Am. J. Pediatrics*, In press.
17. ROBINSON, H. M., JR. and ROBINSON, R. C. V.: Fludrocortisone in dermatoses. *Monographs on Therapy*, On press.

F. *Educational Activities*—Lectures, Seminars, Conferences to Medical Groups

1. September 3, 1955 Robinson, H. M., Jr.: German Therapy Week at Karlsruhe, Germany, "Antibiotic and Steroids in the Practice of Dermatology."
2. October 20, 1955 Robinson, H. M., Jr.: Connecticut Academy of General Practice, Hartford, Conn., guest speaker. "Recent Advances in the Treatment of Skin Eruptions."
3. October 21, 1955 Robinson, H. M., Jr.: Beginning of a series of ten lectures on Dermatology to the nurses of St. Agnes Hospital.
4. October 21, 1955 Robinson, H. M., Jr.: Beginning on this date six lectures on Dermatology to the nurses at Union Memorial Hospital.
5. November 9, 1955 Robinson, H. M., Jr.: Southern Medical Association, Houston, Texas, discussion of paper "Sebizon in Seborrheic Dermatitis."
6. November 9, 1955 Ellis, Francis A.: Southern Medical Association, Houston, Texas, vice president of the section on dermatology, member of the panel on histopathology.
7. November 9, 1955 Robinson, R. C. V.: Southern Medical Conference, Houston, Texas, paper presented "Topical Steroid Therapy."

8. November 9, 1955 Robinson, H. M., Jr.: Southern Medical Association, Houston, Texas, co-author of paper on "Topical Steroid Therapy."
9. November 9, 1955 Strahan, John F.: Southern Medical Association, Houston, Texas, co-author of paper on "Topical Steroid Therapy."
10. December 6, 1955 Robinson, H. M., Jr.: American Academy of Dermatology and Syphilology, Chicago, Ill. Lecture "Topical Steroid Therapy."
11. December 7, 1955 Robinson, H. M., Jr.: American Academy of Dermatology and Syphilology, Chicago, Ill. Lecture "The Treatment of Granuloma Inguinale."
12. December 8, 1955 Robinson, H. M., Jr.: American Academy of Dermatology and Syphilology, Chicago, Ill. Lecture "Prednisone and Prednisolone in the Treatment of Dermatoses."
13. December 7, 1955 Ellis, Francis A.: American Academy of Dermatology and Syphilology, Chicago, Ill. Participant Teacher in the Course on Dermal Pathology.
14. December 8, 1955 Ellis, Francis A.: American Academy of Dermatology and Syphilology, Chicago, Ill. Lecture "Special Problems in Dermal Pathology."
15. December 9, 1955 Bereston, Eugene S.: American Academy of Dermatology and Syphilology, Chicago, Ill. "Nystatin in Candida Albicans Infections."
16. January 3, 1956 Ellis, Francis A.: Mexican Dermatological Association, Mexico City, Lecture "Interesting Dermatological and Pathological Sections."
17. February 24, 1956 Ellis, Francis A.: Louisiana State Dermatological Meeting, Guest Lecturer on Dermal Pathology.
18. February 24, 1956 Robinson, H. M., Jr.: Appointed chairman of the committee on Public Medical Instruction for the Medical and Chirurgical Faculty of Maryland.
19. March 4, 1956 Robinson, H. M., Jr.: Lecture to the Pennsylvania Academy of General Practice in Pittsburgh, Pa. "Modern Treatment of Common Dermatoses."
20. March 10, 1956 Robinson, H. M., Jr.: Atlantic Dermatologic Conference in New York City. Discussion of Cases of Fibrous Xanthoma, Erythema Multiforme, and Reiter's Syndrome.
21. March 10, 1956 Ellis, Francis A.: Atlantic Dermatologic Conference in New York City. Discussion of Pathology and Cases Presented.

22. March 20, 1956 Robinson, H. M., Jr.: Maryland Academy of Medicine and Surgery. "Cutaneous Manifestation of Systemic Diseases."
23. April 8, 1956 Robinson, H. M., Jr.: Television broadcast on TV-MD. "Plastic Planning for the Removal of Acne Scars."
24. April 8, 1956 Strahan, John F.: Television broadcast on TV-MD. "Plastic Planning for the Removal of Acne Scars."
25. April 8, 1956 Zeligman, Israel: Television broadcast on TV-MD. "Plastic Planning for the Removal of Acne Scars."
26. April 8, 1956 Ellis, Francis A.: Southeastern Dermatological Conference, Charlotte, N. C. Discussion of the Pathology of the Cases Presented.
27. May 17, 1956 Robinson, H. M., Jr.: Lecture to the staff, St. Agnes Hospital, Baltimore, Md. "The Skin as a Diagnostic Site."
28. June 7, 1956 Ellis, Francis A.: Elected to the Board of Directors of the Society of Investigative Dermatology.
29. June 9, 1956 Robinson, R. C. V.: American Medical Association Convention, Chicago, Ill. Opening discussion, "Candida Albicans Infection of the Skin," by Drs. Wright and Sternberg.
30. June 18, 1956 Robinson, H. M., Jr.: American Dermatologic Association, Santa Barbara, California, opening discussion of the paper "Cutaneous Papilomatosis," by Dr. Beatrice Kesten. Other paper discussed was "Undergraduate Education" by Dr. Donald Pillsbury.
31. June 30, 1956 Ellis, Francis A.: Pacific Dermatological Association, Honolulu, Hawaii. Panel on Histopathology.
32. June 20, 1956 Robinson, R. C. V.: New Jersey Academy of General Practice, "Cutaneous Manifestations of Peripheral Vascular Disease."
33. September 7, 1956 Robinson, H. M., Jr.: Television broadcast for the Baltimore City Health Department. "Ringworm."
34. October 15-26, 1956 Robinson, H. M., Jr.; Robinson, R. C. V., and Cohen, Morris M.: Exhibit, The New York Academy of Medicine, "Topical Steroid Therapy."
35. October 30, 1956 Robinson, H. M., Jr.: "Antibiotic Combinations in Dermatology." Read before the panel on Antibiotics in Kalamazoo, Mich.
36. November 12, 1956 Ellis, F. A.: A member on the panel on Dermal Pathology. Also opening discussion of Dr. Morris Waisman's article on "Skin Tags."
37. November 12, 1956 Robinson, H. M., Jr.: Exhibit, Southern Medical Association. "Tranquilizers in Dermatology."

38. November 19, 1956 Robinson, H. M., Jr.: A member of the panel on Geriatrics. Discussed before the American Geriatric Society, New York City.
39. December 8, 1956 Ellis, Francis A.: American Academy of Dermatology meeting, Chicago, Ill. Consultant on the Panel on Clinical Pathological Problems.
40. December 8, 1956 Robinson, H. M., Jr.; Robinson, R. C. V., and Strahan, J. F.: American Academy of Dermatology, Chicago, Ill. Exhibit, "Tranquilizers in Dermatology."
41. January 14, 1957 Ellis, Francis A.: Lecture on "Dyskeratoses" at the Brook Army Hospital, San Antonio, Texas.
42. February 7, 1957 Ellis, Francis A.: Lecture on "Dyskeratoses" to the staff of Walter Reed Army Hospital.
43. March 28, 1957 Robinson, H. M., Jr.: "Cutaneous Manifestations of Systemic Diseases." Lecture to the Staff at Walter Reed Army Hospital.
44. April 4, 1957 Robinson, H. M., Jr.: American Academy of General Practice Meeting, Harrisburg, Penna. Lecture on the "Management of Common Dermatological Conditions."
45. April 11, 1957 Robinson, H. M., Jr., and Ellis, Francis A.: presented paper entitled "Cutis Laxa" before the American Dermatological Association Meeting in Bellaire, Fla.
46. June 2, 1957 Ellis, Francis A.: A member of the Board of Directors of the Society of Investigative Dermatology.

Exhibits

1. Nov. 6 to 10, 1955 Robinson, H. M., Jr.; Robinson, R. C. V., and Strahan, John F.: Southern Medical Association meeting. "Topical Steroid Therapy." Houston, Texas.
2. Dec. 5 to 9, 1955 Robinson, H. M., Jr.; Robinson, R. C. V.; Strahan, John F., and Cohen, Morris M.: American Academy of Dermatology and Syphilology, Chicago, Ill. "Preparations of Steroids for Topical Therapy."
3. Mar. 3 to 6, 1956 Robinson, H. M., Jr.; Cohen, Morris M.; Robinson, R. C. V., and Bereston, Eugene S.: American Academy of General Practice meeting, Washington, D. C. "Simplified Office Mycology."
4. Mar. 17 to 22, 1956 Robinson, H. M., Jr.; Cohen, Morris M.; Robinson, R. C. V., and Bereston, Eugene S.: Sesquicentennial Celebration at College Park, Maryland. "Simplified Office Mycology."
5. June 10 to 14, 1956 Robinson, H. M., Jr.; Robinson, R. C. V., and Strahan, John F.: American Medical Association, exhibit "Preparations of Steroids for Topical Therapy."

6. June 10 to 14, 1956 Bereston, Eugene S.: American Medical Association meeting, Chicago, Ill. "Onychomycosis" (co-exhibitor with Dr. Cleveland White of Chicago).

G. *Needs of the Division*

a. *Space*

There is an urgent need for more examining rooms in the Out Patient Department. In visualizing growth over the next ten year period, we will probably need at least double our present space. We definitely need a laboratory for research in pathology and chemistry. Space should also be allotted for animal storage. Provisions must be made for adequate space for the examination and treatment of private patients.

b. *Personnel*

At present we have one part-time secretary who is paid from grants-in-aid and one full-time secretary on the University budget. There is definite need for another full-time medical secretary who may process routine reports and prepare manuscripts and correspondence.

We should have provisions in the budget for both a resident and an assistant resident in dermatology. We have one full-time Fellow who is working without salary. Funds should be allotted for the payment of such individuals.

We have one technician. The expanding research program, in the very near future, makes the services of another technician necessary. Funds should be made for a technician grade number 2.

c. *Research Funds*

At present we have an allotment of \$600.00 a year from the department of medicine. In order to provide for the purchase of animals and other expendable supplies, this should be increased.

d. *Travel Funds*

Funds should be available to defray the expenses of individuals who are actively participating in national meetings.

DIVISION OF GASTROENTEROLOGY

A. *Personnel:*

Ebeling, Wm. Carl, M.D. Assistant Professor of Medicine and
Head of Division

Schochat, Albert J., M.D. Instructor in Gastroenterology
and Staff

B. *Grants-in-aid—1956-1957:*

None.

C. *Curricular Activities:*

Members of the division have participated in the teaching of introductory clinical sessions to the sophomore class, ward consultations with members of the junior and senior classes, endoscopic instruction to the house officers, and out-patient

clinical supervision of senior students. Lectures and seminars for the junior and senior classes have been presented occasionally during the year.

D. *Research Activities:*

Dr. Ebeling is participating in salicylate absorption studies with the Department of Pharmacology.

E. *Publications:*

EBELING, WM. CARL and LITTLE, JOAN W.: The Demonstration of Malignant Cells Exfoliated from the Proximal Colon. *Ann. Int. Med.*, **40**, No. 1, January 1957.

F. *Educational Activities:*

November 14, 1956—Dr. Ebeling: "A Comparison of Exul and Exul Minus NUPRA in the Treatment of Duodenal Ulcer Disease," First Annual Clinical Conference on Peptic Ulcer, New York, N. Y.

April 20, 1957—Dr. Ebeling: "The Etiology of Peptic Ulcer," Symposium on Peptic Ulcer, Chattanooga Medicine Co., Chattanooga, Tenn.

May 4, 1957—Dr. Ebeling: "Functional Evaluation of Liver Disease," Annual Medical and Surgical Symposium, Lutheran Hospital of Maryland, Inc., Baltimore, Md.

May 17, 1957—Dr. Ebeling: "Diagnosis of Diseases of the Pancreas," Annual Convention of Provident Hospital Former House Officers Association, Baltimore, Md.

G. *Needs of the Division:*

- a. Space—this is dependent on the personnel available.
- b. Personnel—one Fellow (full time), one summer Fellow, and probably one technician.

DIVISION OF HYPERTENSION

A. *Personnel:*

Samuel T. R. Revell, Jr. . . . Head of Division and Associate Professor of Medicine
 Francis J. Borges. Assistant Head of Division and Associate in Medicine
 George Entwisle. Assistant Professor of Medicine
 Emidio A. Bianco. Hypertension Foundation Fellow in Medicine

B. *Grants-In-Aid—1956-1957*

	<i>Amount</i>	<i>Title</i>
Hypertension Foundation, Inc.	\$8,000.00	Fellowship
West Baltimore Kiwanis Club.	500.00	Equipment
Bressler Reserve Fund.	4,200.00	Spectrophotofluorometer
Maryland Heart Association.	4,270.00*	Research in Serotonin

*Effective July 1, 1957

C. *Curricular Activities:*

Members of the Division have actively participated in the Teaching program of the Department of Medicine. Regular weekly rounds in problems of hypertension and renal disease have been conducted for the house staff, junior and senior students assigned to the medical wards, stressing meticulous etiologic diagnosis. An addi-

tional weekly Hypertension Clinic, in the Out Patient Department, has been maintained. Here the senior students attend as an elective. Members of the Division have participated in the Tuesday noon Medical Clinics and the Saturday seminars for junior and senior students, house staff and faculty.

D. *Research Activities:*

1. Clinical research dealing with the pathogenesis of human hypertension have indicated that the occurrence of so-called "Essential Hypertension" is inversely proportional to the effort expended in search for some contributing disease, usually renal.
2. Clinical studies in the etiology and pathogenesis of pyelonephritis, employing "Glitter" cell techniques, Gram strains of urinary sediment, simultaneous cultures of urinary bladder, both renal pelves and renal parenchyma obtained by needle biopsy have pointed out the difficulties in establishing a diagnosis of chronic pyelonephritis. These studies cast considerable doubt on the etiologic significance of the common coliaerogenes group of organisms found in urine cultures.
3. Techniques have been perfected so that permanent bilateral ureterostomy openings have been prepared in dogs which allow differential studies of renal function to be repeated for long periods of time. There is pending a grant-in-aid from the United States Public Health Service to study the etiology of pyelonephritis and its possible role in the pathogenesis of hypertension.
4. Metabolic studies on serotonin have shown that its metabolic end-product 5-hydroxy indole acetic acid is reduced in the urine of patients with malignant hypertension and chronic glomerular nephritis. Studies are in progress to determine if this reduced excretion of 5-hydroxy indole acetic acid in severe renal disease is the result of reduced amine oxidase activity in the diseased kidney or to a retention of serotonin in the blood.

E. *Publications*—July 1, 1955 to June 30, 1957

1. BORGES, F. J.; REVELL, S. T. R., JR. and O'MALLEY, W. E.: Prolonged intrahepatic obstructive jaundice induced by para-aminobenzyl caffeine hydrochloride: An Experimental Antihypertensive Agent, *J. Lab. & Clin. Med.*, **47**: 735-742, 1956.
2. BORGES, F. J. and BESSMAN, S. P.: Urinary excretion of 5-hydroxyindole acetic acid, a serotonin metabolite, in hypertensive renal-vascular disease, *Proc. Soc. Exper. Biol. and Med.*, **93**: 513, 1956.
3. BORGES, F. J. and BESSMAN, S. P.: Serotonin—an editorial, *Ann. Int. Med.*, **46**: 425, 1957.

F. *Educational Activities*

1. Medical Seminars—Provident Hospital, Baltimore, October 7 & 14th, 1955—"Hypertension, Diagnosis and Treatment."
2. Medical Seminars—St. Agnes Hospital, Baltimore, Jan. 12th & 19th, 1956—"Hypertension, Diagnosis and Treatment."
3. Medical Honorary Society, Annual Meeting, Mar. 1st, 1956—Discussion—"Serotonin."
4. Delaware Academy of General Practice, Oct. 24th, 1956—"Pathogenesis, Diagnosis and Treatment of Hypertension."

5. Medical Seminar—St. Agnes Hospital, Baltimore, Nov. 1st, 1956—"Pathogenesis, Diagnosis and Treatment of Chronic Pyelonephritis."
6. St. Agnes Hospital Staff—"Serotonin, Its Clinical Implications." Nov. 1956.
7. Maryland Academy of General Practice—Dec. 13th, 1956—"Hypertension, Diagnosis and Treatment."
8. University Hospital Staff Meeting—Jan. 17th, 1957—"Current Problems Relating to Serotonin."
9. Franklin Square Medical Staff Meeting—Jan. 24th, 1957—"Serotonin."
10. Medical Staff Meeting, Maryland General Hospital, Mar. 12th, 1957—"Serotonin."
11. Medical Seminar Mercy Hospital, Baltimore, Mar. 26th, 1957—"Treatment of Hypertension."

G. Needs of the Division

1. Space

- a. Urgently needed is space for additional 10 dog cages in the animal farm.
- b. Badly needed is space for animal experimental work. We are at present using the facilities of experimental surgery which are already taxed to utmost. The space will be inadequate to perform serial differential renal functions and the experimental surgery. Minimal space for these would be 200 sq. feet.

2. Personnel

One Fellow and one technician are paid from funds from grants-in-aid. The division has one half-time secretary. It is requested that funds be provided for a full-time secretary and half-time laboratory helper.

SECTION OF INFECTIOUS DISEASES

A. Personnel

Parker, Robert T., M.D.	Director, Section of Infectious Diseases
Snyder, Merrill J., Ph.D.	Assistant Professor of Medicine in Clinical Microbiology
McCrumb, Fred R., Jr., M.D.	Associate in Medicine
Raffel, Norma K., Ph.D.	Assistant in Clinical Bacteriology
Togo, Yasushi, M.D.	Fellow in Medicine
Blank, Eugene, M.D.	Wyeth Fellow in Medicine
Merideth, Ann M., M.S.	Bacteriologist, Laboratory Technician I

B. Grants-In-Aid—1956-1957

Source	Amount	Title
Parke, Davis and Company	\$10,000.00	Anti-microbial Research
Commission on Immunization,		
Armed Forces Epidemiologic Board	19,000.00	Field Studies on Immunization and Related Problems
Wyeth and Company	5,000.00	Wyeth Fellowship

C. Curricular Activities

Members of the Section have participated in the teaching of microbiology to the sophomore class. Regular weekly rounds in problems of infectious diseases have been given to senior students and house staff on the medical wards. Additional weekly sessions pertaining to specific infectious disease problems have been presented to senior house officers. Lectures and seminars for junior and senior classes and faculty have been presented at the Tuesday noon clinics and Saturday seminars.

D. Research Activities

1. Clinical and laboratory appraisal of antimicrobial drugs, particularly chloramphenicol, has been continued.
2. Studies pertaining to the arthropod-borne viruses, initiated in Malaya with the U. S. Army Medical Research Unit, have been continued and extended in Baltimore. Viral agents, capable of causing fevers of short duration in man have been isolated in suckling mice. One virus strain has been shown to reproduce the clinical manifestations characteristic of dengue. In addition to the agents derived from human sources, eight viruses isolated from wild caught mosquitoes are under study. The interrelationships which exist among these agents, as well as those of African and South American origin, are being investigated by cross-neutralization and cross-complement-fixation tests. Finally, attempts are being made to relate the Malayan prototype viruses to human disease by serologic testing of serum specimens collected from man in Malaya during the course of febrile illnesses.

A comprehensive study of the behavior of arthropod-borne viruses in tissue-culture has been initiated. The application of tissue-culture techniques to viral isolation and serodiagnostic procedures is being stressed.

3. The pathogenesis and chemotherapy of tularemic infections is under study. The varying patterns of immunity in relation to specific therapy with antibiotics have been appraised in mice and guinea pigs. Intermittent therapeutic regimens provide better therapeutic results. Volunteers have been infected by the intradermal route and shown to develop manifestations of mild tularemia. It has been observed that streptomycin, when administered several hours after inoculation, eradicates the infection and clinical disease. The serologic response is also inhibited. Chloramphenicol, so employed, suppresses the infection and, on cessation of administration, active manifestations of illness and antibody response ensue. Host factors relating to pathogenesis and response to chemotherapy are under study. This work was presented at the annual meeting of the Association of American Physicians in Atlantic City in May, 1957.
4. Tissue-culture techniques have been developed and various lines of cells established. Polio virus and other enteric agents, causative in aseptic meningitis, have been isolated and are being characterized by these techniques.
5. Eastern equine encephalitis virus was isolated for the first time in Maryland from the brain of a fatal human case from Salisbury, Maryland, in the summer of 1956. Field studies including a serologic survey of bovine and human hosts within the State of Maryland are under study.

E. *Publications*—July 1, 1955-June 30, 1957

- McCRUMB, F. R., JR.; MERCIER, S.; CHEN, T. H.; MEYER, K. F. and GOODNER, K.: Studies on the antibody patterns in pneumonic plague patients. *J. Inf. Dis.*, **96**: 88-94, 1955.
- PARKER, ROBERT T.: True Significance and Real Incidence of Reactions Following Clinical Use of Antibiotics, *Antibiotics Annual*, 1955-56. Medical Encyclopedia, Inc., New York, N. Y., 967-982, 1955.
- McCRUMB, F. R., JR.; STOCKARD, JOE L. and WOODWARD, T. E.: Leptospirosis as a major cause of short term pyrexia in a tropical environment. *Trans. Asso. Am. Physicians*, **69**: 122, 1956.
- McCRUMB, FRED R., JR.: *Tularemia in H. Conn. Current Therapy*, 1957, Saunders; Philadelphia, 1956.
- PARKER, ROBERT T.: *Rocky Mountain spotted fever. Current Therapy*, 1956.
- PARKER, ROBERT T.: Associate Editor of Section on Rickettsial Infections and author of Chapter on Rocky Mountain Spotted Fever in *Meakins Practice of Medicine*. Text. Meakins, J. C.: *Practice of Medicine*, 6th Ed. C. V. Mosby, St. Louis, 1956.
- PARKER, ROBERT T.: *Rocky Mountain spotted fever. Current Therapy*, 1957.
- McCRUMB, F. R., JR.; STOCKARD, JOE L.; ROBINSON, CHARLES R.; TURNER, LESLIE H.; LEVY, DERRICK L.; KELLEHER, M. F.; GLEISER, CHESTER A. and SMADEL, JOSEPH E.: Leptospirosis in Malaya. I. Sporadic cases among military and civilian personnel. *Am. J. Trop. Med. Hyg.*, in press.
- ALEXANDER, A. D.; EVANS, L. B.; TOUSSAINT, A. J.; MARCHWICKI, R. H. and McCRUMB, F. R., JR.: Leptospirosis in Malaya. II. Antigenic analysis of 110 leptospiral strains and other serologic studies. *Am. J. Trop. Med. Hyg.*, in press.
- McCRUMB, F. R., JR.: Epidemiologic and public health aspects leptospirosis. *Veterinary Medicine*, in press.
- McCRUMB, F. R., JR.; SNYDER, M. J. and WOODWARD, T. E.: Studies on human infection with *Pasteurella tularensis*. I. Comparison of streptomycin and chloramphenicol in the prophylaxis of clinical disease. *Trans. Assoc. Am. Physicians*, in press.

F. *Educational Activities*—July 1, 1955-June 30, 1957

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|------------------------------|--------------------|---|
| November 2, 3
and 4, 1955 | R. T. Parker | Third Annual Symposium on Antibiotics, Washington, D. C. |
| January 18, 1956 | M. J. Snyder | Maryland Society of Medical Technologists "Cerebrospinal Fluid" |
| March 1, 1956 | R. T. Parker | House Staff Conference, St. Agnes Hospital, Baltimore, Maryland. "Management of Purulent Meningitides." |
| March 1 and 2,
1956 | M. J. Snyder | New Academy of Science, New York City Conference on Natural Resistance to Infection. |
| April 3, 1956 | F. R. McCrumb, Jr. | Commission on Immunization—Armed Forces Epidemiological Board, Washington, D. C. |
| April 28-
May 4, 1956 | M. J. Snyder | Annual Meeting, Society of American Bacteriologists, Houston, Texas |
| October 23, 1956 | R. T. Parker | Lecture at Church Home and Hospital, Baltimore, Maryland |
| October 25-27,
1956 | F. R. McCrumb, Jr. | Henry Ford Hospital — International Hepatitis Symposium, Detroit, Michigan |

November 21, 1956	F. R. McCrumb, Jr.	Post Graduate Seminar — "Recent Advances in Infectious Diseases," Wilmington, Delaware
November 13, 14, and 23, 1956	F. R. McCrumb, Jr.	Walter Reed Army Institute of Research — Medical Refresher Course, Washington, D. C. Antibiotics—November 13; Meningitis, November 14; Plague, November 23
December 20, 1956	M. J. Snyder	Medical Staff, St. Agnes Hospital, Baltimore, Maryland. "Encephalitis—Laboratory Aspects."
December, 1956	F. R. McCrumb, Jr. and N. K. Raffel	Maryland General Hospital, Baltimore, Maryland. "Tissue Culture."
January 4 and 5, 1957	M. J. Snyder	New York Academy of Science, New York City. Conference on Immunology and Cancer.
January 12, 1957	F. R. McCrumb, Jr.	American College of Physicians, Regional Meeting, "Eastern Equine Encephalitis in Maryland," Washington, D. C.
January 16, 1957	M. J. Snyder	Peninsula General Hospital, Salisbury, Maryland. "Encephalitis — Laboratory Aspects."
January, 1957	F. R. McCrumb, Jr.	Baltimore City Hospitals, Baltimore, Maryland. "Aseptic Meningitis."
January 14-15, 1957	F. R. McCrumb, Jr.	Civil Defense Laboratory Resources Program, Atlanta, Georgia
February 26, 1957	M. J. Snyder	Medical Staff, Maryland General Hospital, Baltimore, Maryland. "Encephalitis—Laboratory Aspects."
March 19, 1957	F. R. McCrumb, Jr.	Maryland General Hospital, Baltimore, Maryland. "Subacute Endocarditis."
March 21, 1957	F. R. McCrumb, Jr. and N. K. Raffel	St. Agnes Hospital, Baltimore, Maryland. "Tissue Culture."
March 23, 1957	F. R. McCrumb, Jr.	Civil Defense Laboratory Resources Program, Washington, D. C.
March 27, 1957	M. J. Snyder	Post Graduate Basic Science Course. "Natural and Immune Mechanisms of Host Resistance."
March 30, 1957	F. R. McCrumb, Jr.	Commission on Rickettsial Diseases—Armed Forces Epidemiological Board, Washington, D. C.

April 1-3, 1957	F. R. McCrumb, Jr.	Commission on Immunization—Armed Forces Epidemiological Board, Washington, D. C.
April 11, 1957	R. T. Parker	House Staff Conference, Church Home and Hospital, Baltimore, Maryland
April 18, 1957	R. T. Parker	House Staff Conference, Church Home and Hospital, Baltimore, Maryland
April 25, 1957	R. T. Parker	House Staff Conference, Church Home and Hospital, Baltimore, Maryland
April 25, 1957	F. R. McCrumb, Jr.	Kansas University Postgraduate Series—Leptospirosis Symposium, Kansas City, Kansas
April 28- May 2, 1957	F. R. McCrumb, Jr. and M. J. Snyder	Annual Meeting, Society of American Bacteriologists, Detroit, Michigan
May 7, 1957	F. R. McCrumb, Jr. and M. J. Snyder	Association of American Physicians, Atlantic City, New Jersey. "Chemoprophylaxis of Tularemia."
May 13-15, 1957	F. R. McCrumb, Jr.	Civil Defense Laboratory Resources Program—Laboratory Survey: Raleigh, North Carolina, Durham, North Carolina, and Chapel Hill, North Carolina.
May 16 and 17, 1957	M. J. Snyder	Civil Defense Laboratory Resources Program—Laboratory Survey: Columbia, South Carolina and Charleston, South Carolina.
May 23, 1957	M. J. Snyder	Upper Eastern Shore Medical Society, Chestertown, Maryland. "Recent Advances in the Diagnosis of Infectious Diseases."
May 28, 1957	M. J. Snyder	Civil Defense Laboratory Resources Program—Laboratory Survey: Richmond, Virginia.
May, 1957	F. R. McCrumb, Jr.	Civil Defense Laboratory Resources Program—Laboratory Survey: Charlottesville, Virginia and Blacksburg, Virginia.

G. Needs of the Section

- a. *Space*—A small laboratory for processing tissue specimens on the medical floor of the hospital is desirable but not needed urgently.
- b. *Personnel*—Two technicians, one fellow (full-time), one summer fellow, one diener and one associate (full-time) are funded from grants-in-aid. The Section has one secretary. A request is made for an additional senior stenographer to assist in the augmented responsibilities of the Section including the processing

of routine reports, correspondence, preparation of manuscripts, etc. This secretary will serve the other research laboratory sections of the 5th Floor Bressler, particularly in recording laboratory results and preparing manuscripts for publication.

- c. *Research Funds*—Funds of \$1,500.00 per year are needed to provide for small animal needs and other expendable supplies including requirements for dry ice.

DIVISION OF NEUROLOGY

A. <i>Personnel:</i>		Title and Faculty Appointment
Charles Van Buskirk, B.A., M.S., Ph.D., M.D.	Prof. of Neurology and Head, Div. of Neurology	
Jerome K. Merlis, B.S., M.S., M.D.	Prof. of Clinical Neurophysiology, Head, Dept. of Neurophysiology	
Harry A. Teitelbaum, B.S., M.D., Ph.D.	Assistant Professor of Neurology	
Philip F. Lerner, A.B., M.D.	Assistant Professor of Neurology	
George G. Merrill, A.B., M.D.	Assistant Professor of Neurology	
William L. Fearing, M.D.	Associate in Neurology	
Edward F. Cotter, M.D.	Associate in Neurology	
Luis R. Lombardo, M.D.	Associate in Neurology	
Motoji Miyazaki, M.D.	Fellow in Neurology	
B. <i>Grants-in-Aid:</i>		
Donor	Amount	Title
U. S. Public Health Service	\$31,308	Graduate Training Grant in Neurology
U. S. Public Health Service	15,354	Cooperative Study of the Effectiveness of l-Asparagine in Control of Seizures
U. S. Public Health Service	13,869	Relation of Spinal Cord Circulation to Clinical Syndromes of Spinal Cord Disease

C. *Curricular Activities:*

Members of the Division of Neurology participate in teaching Sophomores, Juniors, and Seniors. During the Sophomore year they are responsible for presentation of the course Neurologic Diagnosis, a series of lectures and demonstrations presented weekly during the second semester. Additionally, they participate in the course on Physical Diagnosis. During the Junior year a series of 14 lectures on neurologic diseases is given. Other Junior teaching includes weekly ward rounds in the University Hospital, weekly conferences in the City Hospitals, and bi-weekly clinical-pathologic correlation conferences at the University Hospital. During the Senior year weekly conferences are held at the University Hospital and there is teaching of Seniors in the Neurology Out-Patient Department each week.

Additional activities include bi-weekly conferences held at Montebello Hospital during the school year for those students assigned there. During the summer weekly conferences are held at Montebello for the summer clerks.

Each week the Division of Neurology participates with the Division of Neurosurgery in a neuroradiology conference with the Department of Radiology, a

neuropathology conference with the Department of Pathology and an EEG conference with the EEG Department. These conferences are for students and hospital staff.

There are bi-monthly combined neurology, neurosurgery conferences held in conjunction with the same departments of the Johns Hopkins Hospital, also for students and hospital staff.

This year Dr. Merlis has instituted a course in Medical Electronics for the Medical School Staff.

D. *Research Activities:*

1. The Division of Neurology in conjunction with the Department of Pediatrics has continued with the project concerned with the clinical assessment of asparagine in the treatment of convulsive disorders. This project has developed into a consideration of several different aspects of this problem.
 - a. A study of the toxic effects of this drug in certain individuals indicates that acute ammonia intoxication may arise.
 - b. A study of the fate of orally ingested asparagine in normal individuals indicates that it is very rapidly transformed into glutamine.
 - c. Clinical studies indicate that this drug has limited usefulness as an anti-convulsant but that it is most useful in individuals exhibiting myoclonic seizures or those with severe brain damage.
2. Members of the Division are continuing genetic studies of certain hereditary neurologic disorders.
3. Study of transaminase activity in serum and spinal fluid in normal patients and individuals with neurologic disorders has continued over the past year. More recently this study has been extended to central nervous system tissue. These studies indicate, among other things, that:
 - a. Transaminase does not cross the blood-brain barrier.
 - b. CSF transaminase may be increased by acute destructive central nervous system lesions.
 - c. CSF transaminase may be increased in certain altered physiologic states such as convulsions and hydrocephalus.
4. A study of spinal cord circulation has been instituted. This project is at present concerned with innervation of spinal cord blood vessels.
5. In the Demyelinating Disease Clinic, clinical assessment of the low-fat diet in treatment is in progress.

E. *Publications* (July 1, 1955-July 1, 1957):

- LERNER, P.: Kemadrin, A new drug for treatment of Parkinsonian disease, *The J. of Nerv. and Ment. Dis.*, Vol. 123, No. 1, Jan., 1956.
- LOMBARDO, L. R.: Cerebellar ataxia, progressive external ophthalmoplegia, and cataracts, *J. Neurol.*, 1957 (to be published).
- MERLIS, J. K.; FORBES, A. et. al.: Measurement of the depth of barbiturate narcosis, *EEG Clin. Neurophysiol.*, **8**: 541, 1956.
- MERLIS, J. K. and LOMBARDO, C.: Suprasylvian auditory responses in the cat, *EEG Clin. Neurophysiol.*, **9**: —, 1957 (May issue).

- MERRILL, G. G.: The essence of counselling, *Pastoral Psychology*, Oct., 1956.
- MERRILL, G. G.: Emotional disorders of later life: A review of pathogenesis and treatment of 100 cases. *Md. State Med. J.* (to be published June 1957).
- MERRILL, G. G.: Electroshock therapy in a general hospital. *Md. State Med. J.* (to be published).
- MERRILL, G. G.; Prevention of post-partum psychosis. *So. Med. J.* (to be published).
- MERRILL, G. G. and COOK, E. E.; The EEG in the negro: A comparison of electrical activity of the brain in white and negro patients. *EEG Clin. Neurophysiol.* (to be published).
- MIYAZAKI, M.: Comparative serum and cerebrospinal fluid transaminase levels in acute cerebrovascular disorders. *Bull. Sch. Med., Univ. of Md.*, April, 1957.
- TEITELBAUM, H. A.: ACTH and cortisone therapy in the Guillain-Barre syndrome. *Sinai Hosp. J.*, **5**: 17-20, 1956.
- TEITELBAUM, H. A. and GANTT, W. H.: The effect of starvation on sperm count and sexual reflexes. *Science*, **124**: 363-364, 1956.
- TEITELBAUM, H. A.: Homeostasis and personality. *A.M.A. Arch. Neurol. & Psychiat.*, **76**: 317-324, 1956.
- CHANG, M. C.; SCHAEFFER, D.; TEITELBAUM, H. A. and GANTT, W. H.: Does starvation increase sperm count? *Science*, **124**: 203-204, 1956.
- VAN BUSKIRK, C. and CALLAWAY, E., III; Observations on vibratory thresholds, *Confin. Neurol.*, **16**: No. 6, 301-308, 1956.
- VAN BUSKIRK, C.: Carotid artery thrombosis (editorial). *Annals of Int. Med.*, **45**, No. 5, Nov., 1956.

F. Lectures:

- Sept. 12, 1955 Teitelbaum, H. A., Zierler, K. L., Goldstone, H. and Nachlas, J. W. Panel discussion on muscular dystrophies and atrophies, Sinai Hospital, Baltimore.
- Sept., 1955 Merrill, G. G. Lecture to Lutheran Ministers Convocation, Baltimore.
- Nov., 1955 Merrill, G. G. Institute of Psychiatric Treatment, Boston State Hospital, Boston, Mass.
- Dec., 1955 Merrill, G. G. Lecture to University of Maryland Law School, "Injuries to Brain and Spine."
- Dec. 8, 1955 Van Buskirk, C. Post-Graduate seminar, Maryland Academy of General Practice, Sch. of Med., Univ. of Md., Baltimore.
- Dec. 11, 1955 Van Buskirk, C. Television Program (WBAL-TV), Baltimore, "Strokes."
- Jan. 3-4, 1956 Van Buskirk, C. Clinical Conferences and Neurology Rounds, University Hospital, Oklahoma City, Okla.
- Jan. 8, 1956 Lerner, P. Beth Jacob Synagogue, "Religion and Psychiatry." Baltimore.
- Jan., 1956 Merrill, G. G. Address to Rabbinical Assn., "Psychiatry and Religion." Baltimore.
- Feb. 1, 1956 Van Buskirk, C. Clinical Pathological Conference. U. S. Public Health Service Hospital, Baltimore.
- Feb. 17, 1956 Lerner, P. Doctors Hospital, "Parkinsonism." Baltimore. (with film)
- Feb. 19, 1956 Lerner, P. Shaarei Tfiloh, "Community Aid in Treatment of Mental Disease."

- March, 1956 Merrill, G. G. Geo. Washington Univ., Seminar on Geriatrics. Washington, D. C.
- March 11, 1956 Merrill, G. G. Alpha Phi Fraternity, "Teenager and Sex." Baltimore.
- March 12, 1956 Lerner, P. Joseph Levy Chap. Deborah Lodge, "Community Aid in Treatment of Mental Disease." Baltimore.
- March 17, 1956 Van Buskirk, C. Television Program, Sheraton Park Hotel, Washington, D. C. "Multiple Sclerosis."
- March 21, 1956 Van Buskirk, C. Univ. of Maryland, Post-Graduate Seminar "Neurological Aspects of Lupus Erythematosus." Baltimore.
- April, 1956 Lombardo, L. R. Residents Annual Meeting, Wilmer Inst., Johns Hopkins Hospital, Clinical presentation. Baltimore.
- April 7, 1956 Van Buskirk, C. North Virginia Assembly, Alexandria, Va. "Chronic Brain Syndrome."
- April 23, 1956 Teitelbaum, H. A. Sch. of Med., Univ. of Md., Sophomore Class, Psychosomatic processes in personality disturbance associated with organic disease." Baltimore.
- May 10, 1956 Lombardo, L. R. St. Agnes Hosp. Conference, "Cerebrovascular Disease." Baltimore.
- May 10, 1956 Teitelbaum, H. A. Pavlovian Soc. Meeting, Ithaca, N. Y. Round Table on condition reflexes in psychotherapy.
- June, 1956 Merrill, G. G. Lecture to Mental Deficiency Assoc., Trenton, N. J. "Mental Deficiency Problems."
- June, 1956 Lombardo, L. R. House Staff, Salisbury Gen. Hosp., Salisbury, Md. "Aseptic Meningitis."
- June 1-2, 1956 Teitelbaum, H. A. Am. Psychopathological Soc. Meeting, N. Y. C. "Defensive verbal communication processes in psychotherapy."
- Sept. 8, 1956 Van Buskirk, C. Television program (WMAR-TV), "Multiple Sclerosis." Baltimore.
- Sept., 1956 Lerner, P. Mercy Hosp. Seminar. "Acute and Emergency Neurology and Psychiatry Problems." Baltimore.
- Sept. 17, 1956 Lerner, P. Phi Lambda Kappa Med. Fraternity, "Welcoming Address," Freshman Class, Sch. of Med., Univ. of Md., Baltimore.
- Sept., 1956 Merrill, G. G. Institute of Psychiatric Treatment, Boston State Hosp., Boston, Mass.
- Oct. 21, 1956 Van Buskirk, C. Television Program (WBAL-TV), "Encephalitis." Baltimore.
- Oct. 31, 1956 Van Buskirk, C. Delaware Acad. of Gen. Practice, "Diagnosis and Management of Cerebro-vascular diseases." Wilmington, Del.
- Oct. 31, 1956 Cotter, E. F. Del. Acad. of Gen. Prac. "Demyelinating Diseases." Wilmington.
- Oct. 31, 1956 Lombardo, L. R. Del. Acad. of Gen. Prac. "Muscular and Degenerative Diseases of the Motor Neuron." Wilmington, Del.
- Oct., 1956-
May, 1957 Merrill, G. G. Monthly lectures, St. Mary's Church, Hampden, "Mental Health and Religion."

- Nov. 13, 1956 Teitelbaum, H. A. David J. Macht, So. Medical Assn., Discussion of "Pharmacology, of Blood and Urine of Psychotic Patients before and after Drug Therapy." Washington, D. C.
- Nov. 29, 1956 Van Buskirk, C. Medical Rounds, Franklin Square Hospital, "Cerebellar Ataxia." Baltimore.
- Dec., 1956 Merrill, G. G. Address to Maryland Soc. for Clin. and Experim. Hypnosis. "Sexual Complications of Hypnosis." Baltimore.
- Dec. 13, 1956 Van Buskirk, C. Discussion of paper by Weinstein, "Symbolic Organization fter Brain Injury." (Neurol. & Psychiat. Sec.) Med. & Chir. Soc. Baltimore.
- Dec. 23, 1956 Lerner, P. Mercantile Club, "Psychiatry and Religion." Baltimore
- Dec., 1956 Merlis, J. K. Discussion of paper by E. Weinstein, "Effects of Diffuse Brain Injury," Ross Symposium. Baltimore.
- Dec., 1956 Merlis, J. K. Discussion of Symposium on "Prognostic Value of EEG in Epilepsy." Am. League Against Epilepsy Meeting, N. Y. C.
- Dec., 1956 & (Jan. 1957) Lombardo, L. R. Six lectures on Basic Neurology. Crownsville State Hospital, Crownsville, Md.
- Dec. 20, 1956 Lombardo, L. R. House Staff, St. Agnes Hosp. "Encephalitis." Baltimore.
- Jan. 8 (& 22—also Feb. 19, 1957) Teitelbaum, H. A. Psychosomatic Conferences, Johns Hopkins Hospital, "Homeostatic & Neurologic Integration in Personality Structure." Baltimore.
- Jan., 1957 Merrill, G. G. Address to Presbyterian Church School Teachers, "Mental Health in Teaching." Baltimore.
- Jan. 14, 1957 Lerner, P. P.T.A. Beth Jacob Synagogue and Center, Panel Discussion: "Do Religious Educational Needs Produce Conflict in the Child?" Baltimore.
- Jan. 15, 1957 Van Buskirk, C. Mercy Hosp. Medical Staff, "Treatment of Cerebrovascular Accidents." Baltimore.
- Jan. 17, 1957 Van Buskirk, C. Franklin Square Hosp., Medical Staff, "Cervical Abscess." Baltimore.
- Jan. 24, 1957 Van Buskirk, C. St. Agnes Hospital, House Staff, "Multiple Sclerosis." Baltimore.
- Feb., 1957 Merlis, J. K. Maryland Anesthesia Soc., "Electroencephalography," Baltimore.
- Feb. 3, 1957 Lerner, P. Har Sinai Brotherhood, "Psychosomatic Disease: in the Book of Proverbs and Book of Songs." Baltimore.
- Feb. 4, 1957 Lerner, P. Maryland Assn. for Mental Health, Annual Meeting, Annapolis, Md., "The Case for the Mental Hospitals."
- Feb. 14, 1957 Cotter, E. F. St. Agnes Hosp., "Coma, Its Pathogenesis & Treatment." Baltimore.
- Feb. 28, 1957 Teitelbaum, H. A. Sinai Hosp., "Psychosomatic aspects of cerebral vascular disease." Baltimore.

- March, 1957 Lerner, P. Citizens Committee for Aid to Maryland State Mental Hospitals, "Someone who Cares—the Need for Volunteer Workers in Treatment of Mentally Ill." Baltimore.
- Apr. 25, 1957 Van Buskirk, C. Chairman, Scientific Session, Am. Academy of Neurology, Boston, Mass.
- Apr. 27, 1957 Lombardo, L. R. American Academy of Neurology Meeting, reading of paper, "Cerebellar Ataxia, Progressive External Ophthalmoplegia and Cataracts." (paper to be published.)
- Apr. 27, 28, 29, 1957 Van Buskirk, C. Conference on Graduate Educ. in Neurology, Chairman of discussion panel. Boston, Mass.
- May, 1957 Merlis, J. K. Mercy Hosp. Staff Seminar, "Diagnosis of Epilepsy." Baltimore.
- May 21, 1957 Lerner, P. Citizens Comm. for Aid to Maryland State Mental Hospitals, "Our Mental Hospitals." Baltimore.
- May 28, 1957 Teitelbaum, H. A. Maryland Assn. Private Practicing Psychiatrists, "Psychosomatic Aspects of Disturbances in Vision." Balto.

G. Needs of the Division:

- a. *Space:* There is an urgent need for office space for present full time personnel. Additionally, the small laboratory area assigned to neurology this past year is already crowded and within the coming year will be too small.
- b. *Personnel:* At present the Division of Neurology supports through grants-in-aid, two summer Fellows, increasing to four this coming year, one-half a secretary, two-thirds of a full-time associate, one student research assistant, one technician and one part-time EEG technician. In regards to personnel, the division needs increasing University support for two faculty members.
- c. *Summary of Needs:* The Division of Neurology over the past three years has enjoyed for the first time full-time faculty members. This factor has resulted in an increase in the activities of the division and, consequently, an increase in its needs. It is apparent that this division, along with the rest of the Medical School and Hospital will continue to grow for a while. There will be increasing service and teaching activities which can be accomplished with the present personnel only at the expense of research activities. The immediate most urgent needs are increasing University support for faculty members, namely an instructor and an associate, and offices and laboratory space for these people.

Although research funds are quite adequate for the needs of the division at present, these are obtained from an outside source. Such sources, of necessity, delay and restrict activity in this area. A moderate annual University grant of \$1,200 to \$1,500 to the Division for research purposes would produce considerable elasticity in the research program.

OUT-PATIENT DEPARTMENT

A. *Personnel*

George Entwisle, M.D., Assistant Professor of Medicine
Director of Medical Clinic

Joseph C. Furnari, M.D., Associate in Medicine
Assistant Director of Medical Clinic

Attending Physicians in Medical Clinic

Joseph Bronushas, M.D.	Charles Williams, M.D.	Frank Kuehn, M.D.
Leon Kassel, M.D.	Kurt Levy, M.D.	Sherwood Miller, M.D.
John Legge, M.D.	Joseph Matchar, M.D.	Robert Bauer, M.D.
William Esmond, M.D.	Joseph Shear, M.D.	John Stauffer, M.D.
Morton Krieger, M.D.	A. A. Silver, M.D.	Charles Wisseman, M.D.
Donald Mintzer, M.D.	Conrad Acton, M.D.	Lewis P. Gundry, M.D.
Louis Blum, M.D.	Joseph Muse, M.D.	John Strahan, M.D.
Stephen Van Lill, M.D.	Paul Byerly, M.D.	Kyle Swisher, M.D.
Jonas Cohen, M.D.	William Helfrich, M.D.	Leonard Scherlis, M.D.
Stanley Steinbach, M.D.	W. Kennedy Waller, M.D.	Carroll Spurling, M.D.
Seymour Rubin, M.D.	William F. Cox, M.D.	Frank Borges, M.D.
Walter Karfgin, M.D.	Sheldon Greisman, M.D.	James Karns, M.D.
John DeHoff, M.D.		

B. *Grants-In-Aid—1956-1957*

None.

C. *Curricular Activities*

Each member of the Senior Class spends four weeks in the Medical Clinic of the Outpatient Department. The student spends half his day in the general medical clinic and the other half of his day rotating through one of the Medical Sub-specialty Clinics. A weekly session is held with students who report to their classmates on various subjects they have studied.

The Home Visit Program was enlarged in the Fall of 1956. Senior students follow the patients at home under the immediate supervision of the General Practice Resident. Most of the patients seen under this program had acute temporary illnesses.

D. *Research Activities*

None.

E. *Publications*

- FULLER, H. L. and KASSEL, L. E.: Metamine (triethanolamine trinitrate biphosphate) in angina pectoria, *J. A. M. A.*, **159**, No. 18, 1708-1713. 1955.
- ENTWISLE, G.: The cardiac arrhythmias; some aspects of treatment. *The Med. Clin. of N. Amer.*, **39**, 1367-1379, 1955.
- HOLLANDER, W. and ENTWISLE, G.: Transient ventricular tachycardia following the Valsalva maneuver in a patient with paroxysmal atrial tachycardia. *Amer. Heart J.*, **52**, 799-803, November, 1956.
- ENTWISLE, G. and HALE, E: Hemodynamic alterations in hemorrhagic fever. *Circulation* **15**, 414-425, 1957.

SILVER, A. A. and ZELIGMAN, I.: *Necrobiosis lipoidica diabeticorum* controlled equally by insulin and tolbutamide (Orinase) Sinai Hosp. J., **6**: 106, 1957.

SILVER, A. A. and SHAW, H. M.: Toward further simplification of the diabetic diet, Sinai Hosp. J., **6**: 99, 1957.

F. *Educational Activities: Lectures, Seminars and Conferences to Medical Groups off Campus.*

Dehoff, J. B.: "The Doctor and the Over-weight Patient"; Eighth Post-Graduate Assembly, Doctors Hospital, January 19, 1956.

Entwisle, G.: Post-Graduate Course, Walter Reed Army Medical Center, Antibiotics in the Meningitides, Participant, November 16, 1956.

Entwisle, G.: "Sarcoidosis", St. Agnes Hospital, March 28, 1957.

Entwisle, G.: "Sarcoidosis", Maryland General Hospital, May 28, 1957.

Entwisle, G.: "Chemoprophylaxis of Infectious Diseases", Am. Coll. of Health Asso. April 25, 1957, Lord Baltimore Hotel.

G. *Needs of the Division*

a. *Space*—The Medical Clinic area is at present too small to handle the current load of the clinic. More examining areas are needed. The use of other clinic areas for this is the current solution, but not an ideal one.

b. *Personnel*—There has been variation in the number of house officers assigned each month to the Medical Clinic during the past year. In addition, vacations, medical meetings, and illnesses have further varied the number of house officers in the OPD during a given month. A more stable, or at least a more predictable number of house officers, is needed for greater efficiency in the Medical Clinic.

In January, 1957, residents from the Maryland General Hospital began rotation through the Medical Clinic of the University Hospital. This was most helpful.

c. *Equipment*

When a noon "conference time" becomes available, an additional blackboard in the classroom will be helpful. An appropriate slide library for use in teaching at this time is being collected. When these sessions are held four days a week (excluding Tuesdays for medical grand rounds) a projector and screen will be needed for use in this classroom.

An electrocardiograph will be needed for the amplified Home Visit Program next fall. An expirograph, of great benefit in teaching pulmonary physiology to students, would be most helpful. In addition, this will be of definite benefit to the Chest Clinic where it will also serve as a diagnostic tool. Two Schiotz tonometers are needed so that routine tonometry can be done on all new patients over the age of 50 as part of their complete work-up.

DIVISION OF PHYSICAL DIAGNOSIS

A. *Personnel:*

Marriott, Henry J. L., M.D.

Associate Professor of Medicine and
Head of Division

Richardson, Aubrey, M.D.
and Staff

B. *Grants-in-aid:*

None.

C. *Curricular Activities:*

Instruction of sophomores, 16 weekly 3 hour sessions, during 2nd semester.

D. *Research Activities:*

None.

E. *Publications:*

None.

F. *Educational Activities:*

None.

G. *Needs of Division:*

None.

DIVISION OF RADIOACTIVE ISOTOPES

A. *Personnel*

Bauer, Robert E. Co-Director—Assistant Professor of Medicine

Workman, Joseph B. Co-Director—Assistant Professor of Medicine

Patten, David H. Fellow in Medicine

Dennis, John M. Consultant, Professor of Radiology and Head,
Department of RadiologyB. *Grants-in-aid—1956-1957*

Source	Amount	Title
American Cancer Society.	\$6,102.00	Radioisotopes in Cancer
U. S. Public Health Service. . . .	2,300.00	Diodrast (I-131) in Renal Function
E. R. Squibb & Sons.	2,500.00	Fellowship Training

C. *Curricular Activities*

Members of the Division have participated in the teaching of the medical uses of radioactive isotopes as applied to the basic sciences—notably Physiology, Biochemistry and Pharmacology—to the freshman and sophomore students.

Ward rounds and seminars, some in collaboration with the Division of Endocrinology, have been conducted for the senior students and interested resident staff.

Lectures and seminars for the junior and senior classes, house staff, and faculty members have been presented at the Tuesday Clinics (University and Mercy Hospitals).

D. *Research Activities*

1. The importance of serial blood volume determinations in the evaluation and management of heart failure is being evaluated. The various methods of measurement (RISA, Cr-51 or simultaneous RISA and Cr-51) are being analyzed in order to select the most reliable and practical method. (In cooperation with the Division of Cardiology.)

2a. The proper role of radioactive iodine in the diagnosis and therapy of thyroid nodules and thyroid malignancy is long overdue for a critical evaluation. The frequency of the nodular goiter and its low incidence of malignancy strongly suggest that the prophylactic removal of all thyroid nodules to prevent later malignant degeneration is ill-advised. It is our intention to determine if this confused situation can be clarified by a combination of the available methods including: (1) physical examination, (2) P.B.I., (3) I-131 uptake and scan, (4) I-131 uptake response after T.S.H. and thyroid extract, and (5) the response of the nodular disorder to a therapeutic trial with thyroid extract.

2b. To date we have treated 65 patients with thyroid malignancy. Our results have been occasionally dramatically successful but, in general, discouraging and inadequate. Therapeutic programs in the recent literature have fluctuated between the extremes of (1) radioactive iodine combined with complete thyroid ablation and (2) the more conservative approach of less complete thyroid surgery, repeated as indicated, combined with long term therapy with thyroid extract. The advocates of this latter approach have stressed the importance of available T.S.H. in the continued growth and spread of thyroid carcinoma which they attempt to reduce by the administration of exogenous thyroid extract to supplement the endogenous supply. Our current program is aimed at slowing the rate of growth and spread of thyroid malignancy after adequate surgery by the administration of thyroid extract. Thyroid ablative surgery plus large doses of I-131 are reserved for those few select patients with demonstrable metastases who have high I-131 uptakes. (A part of this study is in cooperation with the Department of Surgery.)

3. The therapy of hyperthyroidism with radioactive iodine has been a continuing program since 1950 during which time over 300 cases have demonstrated good results in over 80 per cent. Special consideration is being given to (1) patients with hyperthyroidism, recurrent after surgery, (2) patients with hyperthyroidism complicated by heart disease, and (3) the more precise evaluation and therapy of the nodular goiter with its masked toxicity and its high incidence of associated cardiac disorders. (Part of this program is a cooperative study with the Division of Cardiology.)

4. The treatment of selected euthyroid cardiacs with radioactive iodine has been completed and evaluated in 18 patients. The purpose of this therapy is to create a favorable balance between metabolic demands and a failing cardiac reserve. It has been shown to be successful in approximately 50 per cent of the cases so treated. Certain inadequacies have become evident and the current studies are designed for more precise evaluation of the role of psychiatric factors and the rigid adherence to strict medical regimes prior to the inclusion of candidates in this study.

5. Some selected cases of sterility, abortion, prematurity, obesity, and even mental deficiency may be due to subclinical disturbances in thyroid physiology. These particular cases can properly be categorized as having a "low thyroid reserve" (inability of the thyroid gland function to adequately respond to sustained physiological stress such as pregnancy). The measurement of P.B.I. and I-131 uptake before and after the administration of T.S.H. offers a suitable test device to determine the adequacy of the individual thyroid reserve based on its response to

physiological stress. The results of the initial studies have been fairly selective and the response to definitive therapy with thyroid extract has been encouraging. (Part of this study is in cooperation with the Department of Obstetrics.)

6. The use of radiogold in the management of patients with late carcinomatous processes complicated by intractable ascites and/or pleural effusions has been a continuing study since 1950. In June, 1956, the analysis of 60 cases was reported in the *American Journal of Roentgenology, Radium Therapy and Nuclear Medicine*, 75: June, 1956. We are now extending the study to compare the effectiveness of nitrogen mustard combined with x-ray therapy with that of radiogold in the management of these difficult problems.

7a. A research program, in which radioactive iodine tagged diodrast is used as an indicator in the study of renal function, was begun during the summer of 1956. The program is in cooperation with the Division of Urology of the Department of Surgery and a small research grant was obtained from the United States Public Health Service (USPHS) to provide necessary electronic equipment for this pilot study.

To date, a number of renograms have been performed, and, although a greater number in a larger variety of clinical conditions are necessary before the test can be properly evaluated, it is felt that our preliminary results show considerable promise. It is planned to compare tracings obtained by diodrast with those obtained with a second urography dye, Renografin, which is being tagged, especially for this study with I-131 by E. R. Squibb & Son Radiopharmaceutical Division.

7b. In May, 1957 E. R. Squibb & Sons very kindly began supplying the Division with tracer amounts of Cobalt-58 labeled vitamin B-12 for study of macrocytic anemias. Prior to this time the long half life isotope of cobalt—namely Co-60 with half life of 5 years—was the only tagged B-12 available. Because of the high energy gamma produced by the Co-60 isotope and its long half life, dosage of the tracer had to be kept at a minimum making clinical accuracy poor.

Co-58 has a half life of 70 days thus allowing a larger and more efficient tracer dose and increasing validity of the test. We are the first unit in this area to have received Co-58 B-12 for clinical use in humans.

7c. Studies are underway in other fields as well: I-131 labeled Rose Bengal in tracer amounts is concentrated by the liver. Used in conjunction with scintiscanner, hepatograms or tracing of functioning liver tissue have been made. It is too soon to evaluate the usefulness of this procedure. However, should sufficient interest be shown by cooperating agencies, information as to hepatic function may well be forthcoming.

E. *Publications*—July 1, 1955-June 30, 1957

WORKMAN, J. B.: The peaceful atom, Bulletin Alumni University of Maryland School of Nursing, 1955.

CROSBY, R. M. N.; BAUER, R. E.: Subdural collections of fluid in infants and children, II. Study with radioactive sodium phosphate (P-32), Journal of Neurosurgery, Vol. XIII: No. 2, 140-144, March, 1956.

BAUER, R. E.: The present status of the diagnosis of hyperthyroidism, (Editorial) Annals of Internal Medicine, Vol. 44: No. 1, January, 1956.

- DENNIS, J. M.; WORKMAN, J. B. and BAUER, R. E.: Radioactive colloidal gold in the control of malignant effusions, Report and analysis of 60 patients. *The American Journal of Roentgenology, Radium Therapy and Nuclear Medicine*, Vol. LXXV: No. 6, June, 1956.
- YEAGER, G. H.; WORKMAN, J. B.; HOLBROOK, W. and PATTEN, D. H.: Thyroiditis: A review and presentation of forty pathologically proven cases of chronic thyroiditis. (Accepted for publication in the *Southern Medical Journal*).

F. *Educational Activities*

1955

- October 11 "Radioisotopes in Medicine"
Dr. Joseph B. Workman. Staff Meeting, Maryland General Hospital, Baltimore, Maryland
- November 8 "Use of Radioactive Iodine in Diagnosis of Thyroid Disorders"
Dr. Joseph B. Workman. Staff Meeting, Mercy Hospital, Baltimore, Maryland
- December 2 "Thyroid Diseases, Diagnosis, and Therapy"
Dr. Joseph B. Workman. Staff Meeting, Provident Hospital, Baltimore, Maryland
- December 14 "Use of Scintiscanner in the Detection and Management of Thyroid Carcinoma"
Dr. Joseph B. Workman. Cancer Section, Baltimore City Medical Society, Joint Meeting with NIH. University Hospital, Baltimore, Maryland

1956

- January 5 "Use of Radioisotopes in Therapy of Malignancy"
Dr. Joseph B. Workman. Staff Meeting, Mercy Hospital, Baltimore, Maryland
- February 16 "Thyroid Disorders, Diagnosis, and Management"
Dr. Joseph B. Workman. Staff Meeting, St. Agnes Hospital, Baltimore, Maryland
- March 3-7 Dr. Joseph B. Workman, Dr. John M. Dennis, Mrs. Dorothy DeSantis, and Janet Estes. Centennial-Sesquicentennial Celebration, College Park, Maryland. Booth as part of School of Medicine display.
- March 16 "Value of Blood Volume Determinations by Radioisotope Methods in Various Disease States"
Dr. Joseph B. Workman. Eastern Conference of Radiologists, Baltimore, Maryland
- March 26 "Use of Radioisotopes in Clinical Medicine"
Dr. Joseph B. Workman. Staff Meeting, Washington Sanitarium & Hospital, Takoma Park, Maryland
- April 4 American Cancer Society—"Until Tomorrow—Use of Radioisotopes in the Detection of Cancer"
Dr. Joseph B. Workman and Mrs. Dorothy DeSantis. Television Program—WAAM-TV, Baltimore, Maryland

- May 25 "Use of Scintiscanner in the Diagnosis and Treatment of Thyroid Disorders"
Dr. Joseph B. Workman. Society for Experimental Biology and Medicine—Maryland Section. Army Chemical Center, Maryland
- August 21 "I-131 Therapy Thyroid Cancer"
Dr. Joseph B. Workman. Medical Staff, V. A. Hospital, Fort Howard, Maryland
- October 10 "Thyroid Disorders, Diagnosis and Treatment" (As a part of Post-Graduate Course—Basic Physiology as Applied to Clinical Medicine)
Dr. Joseph B. Workman. Delaware Academy General Practice, Wilmington, Delaware
- October 30 "The Thyroid and Radioactive Iodine"
Dr. Joseph B. Workman. Surgical Staff Meeting, Franklin Square Hospital, Baltimore, Maryland
- November 2 "Latest Uses of Isotopes in Diagnosis and Treatment" (As a part of Series—Recent Advances in Medicine)
Dr. Joseph B. Workman. Post-Graduate Institute, Doctor's Hospital, Baltimore, Maryland
- November 12 "Radioisotopes in Medicine"
Dr. Joseph B. Workman. Formal Discussion of paper presented by Dr. Howard Andrews, General Practice Session, 50th Annual Meeting Southern Medical Association, Washington, D. C.
- November 15 "Radioactive Isotopes—Their Rise in Diagnosis and Therapy"
Dr. Joseph B. Workman. Post-Graduate Series, St. Agnes Hospital, Baltimore, Maryland
- November 18 "The Thyroid Gland—Past, Present, and Future"
Dr. Robert E. Bauer. University of Maryland Television Program—WBAL-TV, Baltimore, Maryland
- December 11 "Infectious Mononucleosis"
Dr. Joseph B. Workman. Staff Meeting, Mercy Hospital, Baltimore, Maryland
- December 13 "Thyroid Disease, Diagnosis, and Therapy" (As part of Section on Endocrinology)
Dr. Joseph B. Workman. Post-Graduate Lecture—Maryland Academy General Practice, Baltimore, Maryland
- 1957
- January 18 "Chemotherapy of Malignant Disease"
Dr. Joseph B. Workman. Surgical Staff Conference, Church Home Hospital, Baltimore, Maryland
- February 20 "Thyroiditis, Diagnosis, and Management"
Dr. Joseph B. Workman. Baltimore County Medical Society, Stafford Hotel, Baltimore, Maryland

- February 20 "Uses of Radioisotopes in Medicine"
Dr. Joseph B. Workman. Post-Graduate Committee Basic Science Course, Baltimore, Maryland
- March 8 "Medical Uses of Radioisotopes—I Basic Concepts"
Dr. Joseph B. Workman. Entire Staff, V. A. Hospital, Fort Howard, Maryland
- March 13 "Physiology of Thyroid"
Dr. Joseph B. Workman. Post-Graduate Committee—Basic Science Course, Baltimore, Maryland
- March 13 "Diagnosis and Treatment of Thyroid Disorders"
Dr. Joseph B. Workman. Post-Graduate Committee—Basic Science Course, Baltimore, Maryland
- March 22 "Medical Uses of Radioisotopes—II Blood Volume in Health and Disease"
Dr. Joseph B. Workman. Staff Meeting, V. A. Hospital, Fort Howard, Maryland
- March 27 "Application of Radioisotopes to Pediatrics"
Dr. Joseph B. Workman. Staff Meeting, Dept. of Pediatrics, University Hospital, Baltimore, Maryland
- April 5 "Medical Uses of Radioisotopes—III Medical Research Applications"
Dr. Joseph B. Workman. Staff Meeting, V. A. Hospital, Fort Howard, Maryland
- April 11 "Medical Management of Thyroid Disorders"
Dr. Joseph B. Workman. Sussex County (Delaware) Medical Society, Delaware
- April 30 "The Thyroid and Heart Disease"
Dr. Robert E. Bauer. Medical Staff Meeting, Mercy Hospital, Baltimore, Maryland
- May 4 "Clinical Uses of Radioisotopes" (Discussant—R. E. Bauer)
Dr. Robert E. Bauer. Annual Medical and Surgical Symposium, Lutheran Hospital, Baltimore, Maryland
- May 5 "Medical Uses of Radioisotopes"
Dr. Joseph B. Workman and Dr. David H. Patten. University of Maryland Television Program, WBAL-TV, Baltimore, Maryland
- May 22 "Clinical Uses of Radioisotopes"
Dr. David H. Patten. Post-Graduate Biochemistry Seminar, Baltimore, Maryland
- May 23 "Radioactive Iodine as a Tool in Diagnosis and Treatment of Thyroid Disease"
Dr. Joseph B. Workman. Tri-County Medical Society, Purdue University, Lafayette, Indiana

G. Needs of the Division

The existing situation in the Division of Radioactive Isotopes is critical and in a sense unique. The growth rate of the "laboratory service" has been unusually

rapid and at the present time the service load (I-131 uptake, I-131 therapy, blood volumes, scintiscans, etc.) is approaching capacity; occupying over 80-90 per cent of the total available time—secretarial, technical, and professional. The unfortunate result has been the noticeable curtailment of research activities. Moreover, the permanent isotope equipment (scalars, monitors, spectrometers, scanners, etc.), essential for the proper function of the laboratory, has overrun the allocated physical space. The remaining working area is woefully inadequate and seriously overcrowded.

The pressing needs of the Division include:

1. *Space*—Research activities and laboratory service will be seriously handicapped and probably reduced until an additional area of approximately 200 square feet is made available for proper positioning of permanent equipment and the expansion of the severely restricted working area. This additional space does not have to be adjacent to the existing laboratory but should be easily accessible to all types of patients.
2. *Personnel*—Two technicians and one secretary are employed through the hospital to handle the laboratory service load. One fellowship is currently available through a grant-in-aid. A request is made for an additional stenographer, at least, on a part-time basis.
3. *Research Funds*—A grant-in-aid of \$2,500 to \$3,000 per year is necessary to provide continuing support for one Fellow.

An additional \$1,500 to \$2,000 per year is necessary to provide for repair and replacement of equipment and the purchase of supplies. To insure the proper maintenance of the elaborate isotope equipment, \$750 to \$1,000 should be available to a consulting electronics engineer.



DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

Item 1

GENERAL STATEMENT OF OPERATING PLAN AND IDEOLOGY

In general, the Department of Obstetrics and Gynecology fulfills the same function of any clinical department in the Medical School in providing for the care of patients. It exists primarily for the care of obstetric and gynecologic patients. Patient care should be provided on a superior level. This includes the usual aspects of medical care, nursing care, and house staff care. A sincere attempt is made to consider the personality needs of the patient as well. In all instances, whether the patient is ward or private, an intentional effort is made to make her feel as if she belongs in the University Hospital. Facilities are provided for all aspects of private and ward in-patient and out-patient care.

The second reason for the existence of the Department of Obstetrics and Gynecology in the Medical School is found in the various aspects of the teaching of this discipline. This includes instruction and patient experience for medical students, nursing students, the graduate nurse, house officers, and the practicing physician.

Thirdly, it is the function of this department to provide certain laboratory services to aid the physician in the care of patients. This service function at present includes the determination of chorionic gonadotrophin, follicle stimulating hormone, protein bound iodine, and sperm counts of the human male.

Fourthly, research as it relates to the basic problems of reproduction is being carried out in the laboratories of the Department of Obstetrics and Gynecology. Serious efforts are made to induce and assist the several members of the department in clinical research or basic laboratory problems as they relate to clinical problems. At the present time, practicing physicians, medical students, house officers and full-time members of the staff are engaged in the research programs of the Department of Obstetrics and Gynecology.

Item 2

FACULTY AND STAFF

The duties of the Faculty and Staff are varied. This variance is due to an attempt to utilize each member of our Faculty and Staff to his utmost in the teaching, research, and service functions of the department. During the fiscal year under consideration there were four full-time members of this department. These consisted of a Professor and Head, Professor, and two full-time Instructors. These individuals devoted approximately 10 per cent of their time to the private practice of obstetrics and gynecology and the remaining to consultation, teaching, and research. The major burden of house staff responsibility falls to these four full-time staff members. In rotation, they serve as the major consultant on ward services in obstetrics and gynecology. Their chief value as consultants other than professional excellence and interest, lies in their ready availability to the house officer for immediate consultation.

The part-time staff member, who receives a small stipend for his efforts, consisted in the past fiscal year of an Associate Professor, two Assistant Professors, and two Assistants. In general, these individuals have maintained a responsibility in a primary clinical area. One of the Assistant Professors is in charge of the Cancer Clinic, an Assistant aids in the preparation of records, and the other Assistant is in charge of the Clinic.

In addition to the full-time and part-time, are the large number of our Faculty and Staff who serve as volunteer assistants without remuneration. The major portion of their availability and use, other than in the care of private patients, have been in the teaching of medical students and house officers. These men have been relieved of all service responsibilities and have been given small but important assignments in the various instructional areas.

A group of six men have served as operative consultants in the gynecologic service. Their function has been to assist the residents in one major operation a week. Their period of service has rotated throughout the year. The value of this exercise is, of course, obvious. It allows the resident to acquaint himself with the various techniques utilized by the several practitioners. Another small group of men have been engaged in the teaching of office gynecology to the fourth year students. Ten voluntary assistants have been engaged in the teaching of third year students in the presentation of planned material. Student rounds at University and City Hospitals have been made regularly by the volunteer assistants.

In addition to these planned teaching exercises, each private physician has been urged to utilize his own patient material to the utmost in the instruction of house officers and medical students. It should be stressed that the men have never been requested to turn over operations or deliveries or the mechanics of patient care. Instead, the private physician has been urged to instruct the students and house officers in operative technique and in the technique of delivery. It is hoped that from this type of relationship, the medical student and house officer can readily acquaint himself with the manner in which private patients should be managed.

The obstetrical program at Baltimore City Hospitals has been for the fourth year medical students. The full-time instructional staff has consisted of three men, an Assistant Professor and two Instructors. The salaries of one Assistant Professor and one Instructor have been paid in part from the Budget of the Department of Obstetrics and Gynecology.

Item 3

TEACHING

Teaching of the third year medical students has changed somewhat in the last fiscal year. The instructional time has been increased from four weeks of obstetrics as it existed in the past, to six weeks of combined obstetrics and gynecology. During this time the students are seen in small groups and the entire teaching program is repeated each six weeks.

In summary, there are thirty seminars which the students attend in small groups and in which they discuss the outlined material as related to obstetrics and gynecology. There have been basic science discussions on a weekly basis, led by the several members

of the Basic Science Departments of the Medical School. Obstetric and Gynecologic Pathology, as it relates to the clinical aspects of obstetrics and gynecology, has been presented by a member of the full-time staff of the Department of Obstetrics and Gynecology. The usual staff conferences and rounds have been carried out, in addition to manikin practice and the other specialized instruction peculiar to obstetrics and gynecology.

At the beginning of their block on obstetrics and gynecology the students were all instructed that the philosophy of the Department was not primarily to teach but to afford the student the opportunity to learn. With this thought in mind, the didactic lecture system has been completely eliminated. The students have been assigned to both ward and private patients. They have assisted on both ward and private deliveries and they have assisted in operative procedures on both ward and private gynecologic patients. The students have been urged to follow the patients in labor and to assiduously follow the gynecologic patient preoperatively and postoperatively. All planned exercises have been considered to be secondary to actual patient instruction during these six weeks. Accordingly, the students have been expected to attend assigned patients in labor or in the operating room rather than conflicting planned exercises.

Fourth year medical student teaching consists of a four week period. For two weeks, the medical students are assigned in groups of approximately eight to Baltimore City Hospitals. During these two weeks, the student is expected to apply the theoretical and practical knowledge obtained in his third year. These two weeks are primarily designed to give the man an opportunity to operate at a high level of responsibility in caring for obstetrical patients. The average student will deliver twenty-five patients during his two weeks stay at Baltimore City Hospitals. In addition to the practical work, there have been planned rounds and seminars.

The remaining two weeks of the four week period are spent at the University Hospital. The student works in the Out-Patient Department Clinic, in the general clinic, in the Prenatal Clinic, and in specialty clinics. He participates in the original work-up of the gynecologic and obstetrical patient and is tutored by the practicing attending physician, or in his absence, responsible house officers or full-time men. A special program designed toward orienting the students in the office practice of gynecology is presented. He attends the regularly scheduled gynecological cancer clinic, and endocrine and infertility clinic. In this short two week assignment of time, the student is expected to learn the fundamentals of the office practice of obstetrics and gynecology as contrasted to the in-patient care as learned in the third year.

Teaching as it is concerned with the instruction of student nurses and graduate nurses is carried out whenever requested by the nursing department. Teaching as applied to the residency program will be considered under the graduate program.

Item 4

RESEARCH

It is the expressed opinion of the Department of Obstetrics and Gynecology that the research approach to medicine is important in all aspects of medicine. Specifically, the research approach is as important to a general practitioner as it is to an academician. Medical student research is stimulated and nurtured whenever the desire seems to

become apparent in the individual student. A specific grant of money from the Josiah Macy, Jr. Foundation for inducing the medical student towards the research aspects of reproduction has been obtained. During the fiscal year under consideration, three medical students were utilized in the laboratories of the Department of Obstetrics and Gynecology. Although only one publication has been forthcoming from this effort, the experience obtained by the students is considered to be invaluable and unique in that it is not obtained in the regular curriculum of the Medical School.

In a similar manner, research interests are cultivated in the house officer. The full-time staff is, of course, expected to participate voluntarily, readily and willingly in research programs. Research interests of part-time and voluntary assistants are also stimulated and nurtured.

The research attempted and the projects currently active in the Department of Obstetrics and Gynecology in the current fiscal year are listed.

1. Metabolism of intravenously administered progesterone (radio-tracer studies).
2. The basic aspects of metabolism of intravenous progesterone in rabbits.
3. The quantitative determination of chorionic gonadotrophins in blood, urine, and stool.
4. The production of afibrinogenemia, using intravenous amniotic fluid.
5. The prevention of afibrinogenemia in rabbits following the intravenous administration of amniotic fluid.
6. Thyroid metabolism in pregnancy.
7. Tranquilizing drugs in dysmenorrhea.
8. Anatomic studies of uterine fibromyomata.
9. The genesis of locked twins.
10. The evaluation of synthetic oxytocin.
11. The carcinogenic effect of low intensity irradiation on the endometrium.
12. The study of shoulder dystocia.
13. The use of bioflavinoids in the prevention of the accidents of isoimmunization.
14. The continued statistical analysis of the obstetrical data.
15. The statistical coding of all gynecologic admissions, as a new project.
16. Coding and follow-up of all gynecologic cancer.

Item 5

GRADUATE PROGRAM

The graduate program as it refers to the house officer and specialty training in obstetrics and gynecology has consisted of the training of fifteen house officers for this year. Of this group of men, three are eligible for the American Board of Obstetrics and Gynecology. One man is coming into the Department of Obstetrics and Gynecology as a full-time Instructor. The remaining two are entering private practice, one in this community and the other in Florida. Two men are being dropped from the program and a third is being retained as a Fellow. The remaining are continuing in the house officer program. Residency training at other hospitals has been obtained for the two men not continuing in our program.

There are planned exercises for the house officer group. These consist of a weekly staff conference, a weekly house staff conference, a monthly obstetrical and gynecological pathology conference, a monthly Baltimore City Maternal Mortality meeting at the Medical Surgical Faculty, a weekly Junior Staff Conference during the school year, student rounds on obstetrics and gynecology three times weekly, a Fetal Mortality Conference, once monthly, in conjunction with the Department of Pediatrics.

The planned exercises are important in the house officer training program. It is stressed, however, from a philosophical standpoint with our house officers, that postgraduate training is simply the rapid accumulation of experience. To this end, the physician is urged to avail himself to the utmost of the various clinical opportunities present. He is urged to attend the regular clinic sessions, even though he may not be assigned to them. He is urged to attend the various specialty clinics. He is urged to see as many patients as he can and to engage into as many diagnostic and therapeutic procedures as he can. In addition to this, he is constantly reminded that consultation is ever present, at his fingertips.

The house officers are, in effect, in charge of the Out-patient Clinic. Their responsibilities are, of course, subject to modification and are necessarily dependent upon the consultation available. The work load, as far as care of patients is concerned, is primarily a duty of the house officer. In the past fiscal year, there were 23,851 clinic visits in the obstetric and gynecologic clinic. Of these, 16,755 were obstetric out-patient visits and 7,096 were gynecologic out-patient visits. The responsibility of the house officer for in-patients, of course, is not limited to the clinic or ward patients but is extended to the private service as well. During the fiscal year July 1, 1955 through June 30, 1956, for which our statistics are available, there were 3,482 obstetric patients. Of these, 1,316 were private and 2,166 were ward patients.

For the fiscal year under consideration, there were 1,253 gynecologic admissions. Of this, 739 were ward patients. There were 1,058 gynecologic operations of which approximately 50 per cent were ward and 50 per cent were private.

The clinical material available for the instruction of resident physicians was excellent and it is increasing in amount. It is apparent that within a very short period of time additional bed space will be required. This will be required particularly in the care of the cancer patients. The cancer patient's treatment in the past year has necessarily been somewhat prolonged due to the inability to admit the patient for radium therapy as soon as desired.

The graduate program also extends to the practicing physician. A serious postgraduate program was undertaken at Peninsula General Hospital in Salisbury. A resident physician from this department is there throughout the year. The Salisbury physician and the resident physician attend the weekly staff conferences at the University Hospital. In addition to this, the monthly staff conferences at Peninsula General Hospital are attended by members of this staff. A similar graduate program was carried out at Easton Memorial Hospital with the exception of the house officer assignment. No house officers have been sent to Easton but the monthly staff conferences are attended by one physician from our staff. In addition to these planned conferences, our physicians have contributed heavily to postgraduate education at other hospitals in the city.

At Maryland General Hospital, the following presentations have been made during the year by full-time physicians:

- "The Obstetricians Responsibility to the Fetus"
- "Heart Disease in Pregnancy"
- "Cesarean Sections—Types and Their Indications"
- "Pregnancy and Sickle Cell Anemia"

At St. Agnes Hospital:

- "Breech Presentation"
- "The Third Stage of Labor"

At Bon Secours Hospital:

- "Pelvimetry"
- "Cesarean Sections—Types and Their Indications"

At Women's Hospital:

- "Pelvimetry"

In addition to postgraduate education on a city and state basis, the Department of Obstetrics and Gynecology has contributed to postgraduate education on a national level. At the Hartford Memorial Hospital in Hartford, Connecticut, the following papers were presented:

- "Stilbestrol Therapy for Pelvic Endometriosis"
- "Endocrinology in General Practice"
- "The Hormonal Pattern of Uterine Bleeding"

At the Ogden Surgical Society in Ogden, Utah:

- "The Use of Pitocin"
- "Heart Disease in Pregnancy"

At the Utah Obstetrical and Gynecological Society in Ogden, Utah:

- "The Thyroid in the Pregnant Female"

At the West Chester County Medical Society, White Plains, New York:

- Seminar concerning The Maternal Mortality Committee

At the U. S. Army Hospital in Aberdeen:

- "The Third Stage of Labor"
- "Cesarean Sections—Their Types and Indications"
- "The Hormonal Control of Uterine Bleeding"
- "Choriocarcinoma"

At the Georgia Academy of General Practice, Savannah, Georgia:

- "Preserving the Perineum"

Postgraduate education for others and members of the Department have been accomplished by participation in a number of National and International Society meetings. These include:

- The Biological Photographic Association meeting in Rochester, New York
- The Annual Convention of the Association of Medical Illustrators, Iowa City, Iowa
- The course in Gynecology at the Harvard Medical School
- Medical Society meeting at the University of Rochester
- Inspection of Record System for Cancer patients at Kings County Hospital, New York City

American Cancer Society, Annual Scientific Session, New York City
American College of Obstetrics and Gynecology, Chicago
Society for Gynecologic Investigation, Chicago
The Continental Gynecologic Society, Miami
The American Cancer Cytology Conference, Miami
The Endocrine Society meeting, New York
The American Society for the Study of Sterility, New York
The Obstetrical and Gynecological Section of the American Medical Association in New York
The North American Gynecologic Society, Columbus, Ohio

The following papers were presented at National Scientific meetings:

"The Intravenous Metabolism of Progesterone in Rabbits" at the Continental Gynecologic Society in Miami
"Thyroid Function in Pregnancy" at the American College of Obstetrics and Gynecology in Chicago
"Fetopelvic Grading in Breech Presentation" at the Obstetric and Gynecologic Section of the American Medical Association in New York City

Postgraduate education has also been contributed to by the participation of the department in the Committee for Postgraduate Education for the School of Medicine, University of Maryland.

Item 6

STATISTICAL ANALYSIS, WORK DONE AND SERVICE RENDERED

Attention is directed to the enclosed reprint of The Summary of Admissions and Perinatal Mortality of the Department of Obstetrics and Gynecology, School of Medicine, University of Maryland. Apologies are made for the date of this report. It covers the fiscal year from July 1, 1955 thru June 30, 1956. It has been customary in the past to present this report in winter of the year following the accumulation of data. It should be emphasized that the practicality of preparing this report is based solely on the availability of I.B.M. facilities. In addition to this, the great interest of one of the full-time staff members guarantees the integrity and honesty of the report. A similar report on the gynecologic admissions, surgery, cancer, etc. will be available next year since, as of July 1, 1956, a similar statistical program was initiated on the gynecologic patients.

The work done and service rendered in regard to the gynecologic patients can best be summarized according to the out-patient statistics and the admissions to the hospital. During the fiscal year under consideration there were 16,755 obstetric out-patient visits. There were 7,096 gynecologic out-patient visits. There were 82 new gynecologic cancers. The cancer clinic has increased in scope and in quantity. The total number of admissions to the hospital for gynecologic procedures was 1,253. There were 739 ward patients admitted.

Item 7

FACILITIES AND EQUIPMENT

The research facilities and equipment that have been obtained in the past year have consisted of two rooms, one of which is a small animal operating room. The other room is completely equipped for chemical and radio-tracer work. The various pieces of equipment that have been obtained are numerous and the total cost for the entire

facility in the past year is approximately \$25,000. Additional equipment has been purchased for the obstetric and gynecologic pathology laboratory consisting primarily of microscopes and microscope lamps. Third, the obstetric and gynecologic laboratory has, in addition, been equipped with benches for student instruction. Photographic equipment essential to the photography of gross and microscopic specimens in obstetrics and gynecology have also been obtained in the past year. Approximately 1,000 photographs have been taken of both gross and microscopic specimens. The photographic equipment is also used for obtaining pictures, of patients, particularly those with endocrine disorders. Copying work is done for the preparation of slides for lectures. The clinical facilities and equipment have not changed markedly in the past year. There are scheduled changes in the new delivery room area but these have not yet become material. The operation facilities and equipment are essentially the same.

Item 8

COMMUNITY SERVICE

Community service may be divided into service to patients which is well covered in the statistics and general operating philosophy. Community service to non-patients and potential patients has consisted of television programs and radio programs. In addition to this, the various members of the department have been urged to participate in community activities, such as boy scouts, girl scouts and other non-medical activities.

Item 9

PUBLICATIONS

1. ARTHUR, R. K., JR. and KALTREIDER, D. F.: The elderly nullipara, *Obstetrics and Gynecology*, August, 1956.
2. KALTREIDER, D. F.: Episiotomy, *Current Medical Digest*, December, 1956.
3. KALTREIDER, D. F.: The management of the pregnant cardiac, *West Virginia Medical Journal*, January, 1957.
4. McNALLY, H. B. and FITZPATRICK, V DE P.: Patient with four more cesarean sections, *Journal of A.M.A.*, March, 1956.
5. RAPPOPORT, W. J.; GOLDSTEIN, B.; HASKINS, A. L.: Intravenous progesterone, basic effects in rabbits, *Obstetrics and Gynecology*, May, 1957.
6. SIEGEL, I. A.: Total hysterectomy at the time of cesarean section and in the early puerperium, *Southern Medical Journal*, February, 1957.
7. THE UNIVERSITY OF MARYLAND, Annual Report, July 1, 1955 through June 30, 1956, Department of Obstetrics and Gynecology, *Bulletin of the School of Medicine, University of Maryland*, April, 1957.

Item 10

RECOMMENDATIONS

Out-patient Department. Many changes are needed in the out-patient department but no specific recommendations in regard to equipment or physical plant are made due to the hoped temporary nature of the current out-patient area. There is a need, however, for change as far as physicians is concerned. Of all the teaching enterprises in the Department of Obstetrics and Gynecology, the assignments to the out-patient department are the least attended. Attendance of 50 per cent is considered to be well above average.

It is apparent, with an out-patient load of the current magnitude, that a full-time physician should be in charge and in attendance in the clinic. For this reason, an additional physician is being requested on a full-time basis. A position of Assistant Professor is recommended.

In-patient Care. Evaluation of statistics shows an increase in patient load. There has been considerable hospital delay in the admitting and treatment of cancer patients due to the lack of ward beds that could be utilized for this. For that reason, a reappportionment of beds between the obstetric and gynecologic ward service has been recommended. It appears that this plan is approaching the practical point of accomplishment at this time.

Research Facilities. The physical plant is very good. We are completely satisfied with the allotment of space to this department. There is some difficulty, however, in providing a continuity of research programs due to the fact that a competent research director is not always in attendance in the laboratory. For this reason, a new position of Research Assistant is recommended. If this can be obtained, it is hoped that a Ph.D. or M.D. whose primary interest is in research, could be utilized for fulfilling this position.

Social Service. Social service activities in obstetrics and gynecology have been minimal. This department could use at least one full-time social service worker and probably two in the care of obstetric and gynecologic patients.

Respectfully submitted,

Arthur L. Haskins, M.D.



DEPARTMENT OF OPHTHALMOLOGY

The Department of Ophthalmology is not functioning as such pending the construction of an ophthalmology area in University Hospital.

TEACHING IN OPHTHALMOLOGY AT THE UNIVERSITY OF MARYLAND

SCHOOL OF MEDICINE

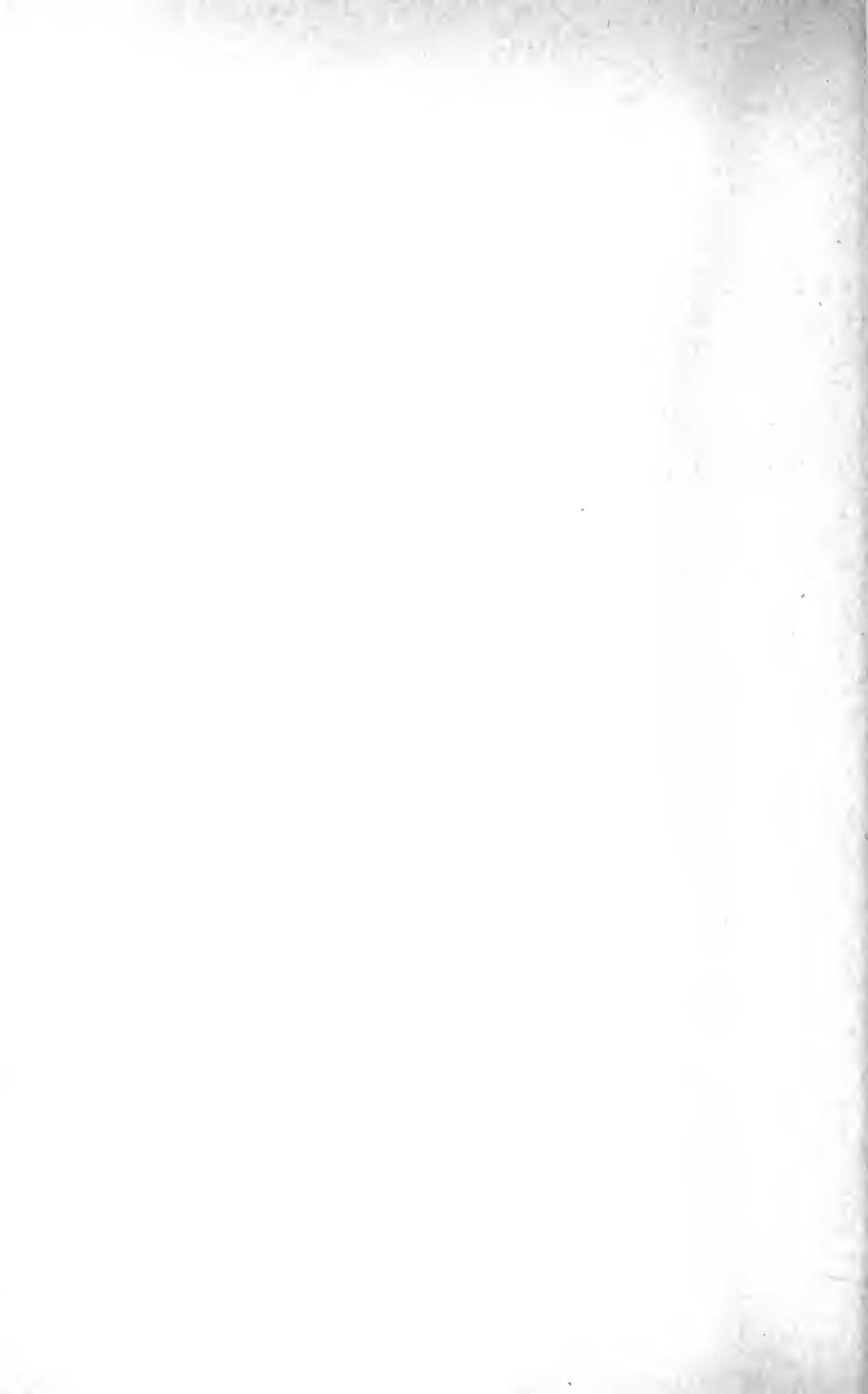
Junior Year

A series of 14 didactic lectures is given, one a week to the entire class. The fundamentals of ophthalmology, including anatomy and physiology of the eye, are stressed and as the course progresses, attention is given to the more common diseases of the eye, refractive errors, and disturbances of ocular motility. The lectures are supplemented with the use of lantern slides. In addition to the lectures, the Junior Class is divided into small groups throughout the year, and each group spends several days in the dispensary of the Baltimore Eye and Ear Hospital. There ophthalmoscopy is stressed, although some attention is also paid to external diseases. The didactic lectures are given by Dr. John C. Ozazewski, and the group at the Baltimore Eye and Ear Hospital is instructed by Dr. Abraham Kremen.

Senior Year

During the Senior Year, small groups make eye rounds on the wards of University Hospital, two to three hours per week for two weeks. Although the study of the fundi occupies the most prominent place in this series of ward rounds, attention is also paid to external ocular diseases.

A series of six to seven lectures are given, and these lectures are primarily clinical in nature. They correlate eye manifestations of general diseases, neurologic ophthalmology, as well as one or two lectures on treatment of acute ocular conditions. Lectures and ward rounds are all conducted by Dr. John C. Ozazewski.



DEPARTMENT OF PATHOLOGY

GENERAL ORGANIZATION AND POLICY

Following the retirement of Dr. Hugh R. Spencer, 30 June 1957, the Dean requested Dr. John A. Wagner, Professor of Neuropathology, to conduct the affairs of the department pending the appointment of a professor of pathology. The expressed objective views of the Dean as to the functioning of the Department were: A. to maintain departmental services; B. to institute such changes in procedure and personnel as would be consistent with improving the general functioning of the organization; C. to perform such research as might be possible; D. to reorganize and present a new curriculum in pathology in accordance with the completely revised principles set forth in the minutes of the Curriculum Committee of the Faculty, as adopted. The following report concerns the extent to which the above has been accomplished.

REPORT

A. Three consultants were named in the Division of Surgical Pathology. These were Dr. Walter C. Merkel, Dr. C. Gardner Warner, Dr. Tobias Weinberg. These pathologists reviewed selected surgical material presented them for consultation by the Staff, thus giving additional support and advice to the reports rendered on some 8,000 surgical specimens received. A total number of 448 autopsies were performed (May 1, 1956-May 1, 1957). While some of the microscopic studies have lagged because of excessive teaching and surgical pathology loads, the majority of these autopsies have been completed.

Consultative services in dermatopathology were made available during the year through the appointment of Dr. Francis Ellis as Chief Consultant in Dermatopathology. Dr. Ellis has met with the Staff weekly to discuss pertinent problems. Consultative services in the operating room have been maintained on a 6 day a week basis. Consultative services have been made available to the Tumor Board through representation in the Department.

The Division of Neuropathology has examined and reported some 586 specimens with an average of about 20 surgical specimens per month, the remainder being outside consultations or autopsies.

B. The appointment of Dr. Francis Ellis as Assistant Professor of Pathology in Dermatopathology was announced (see above). Dr. Russell S. Fisher and his staff were reorganized as a Division of Forensic Pathology. Dr. Fisher retained his personal appointment as Professor of Legal Medicine; however, the remainder of his staff were transferred to the Department of Pathology, many with well-earned promotions.

Through the efforts of the Maryland Division of the American Cancer Society and also with support through a federal teaching grant, Dr. John K. Frost of the University of California was appointed Associate Professor of Pathology and in November 1956 began the organization of the Division of Cytopathology. The prime teaching objectives included the training of technicians and pathologists with added emphasis on resident and medical student training in cytology. Dr. Frost also assumed supervision of the

Cytopathology Laboratory. Seven months thereafter, the laboratory examined and reported some 3,500 specimens. The School of Exfoliative Cytology for technologists was immediately established, accepted its first full class in January and graduated 6 students in June.

Innovations included the installation of a Verifax machine for duplicating records and the institution of snap sheet report forms for surgical pathology.

A Division of Experimental Pathology for medical students was organized through good offices of the dean and under the direction of Dr. Lester Kiefer. The Division of Experimental Pathology functioned through a grant from the National Fund for Medical Education to the extent of some \$6,000.00, mostly spent in the acquisition of basic experimental equipment.

The processing of routine autopsy material was removed from the General Histology Laboratory and was given to one technician as a full-time responsibility. The institution of special stains and some basic histochemical techniques was accomplished.

C. It was impossible to organize any definitive research because of an overwhelming load of routine service pathology and the necessity of creating an entire new undergraduate pathology curriculum in the midst of a changing department and with numerically inadequate personnel. In the category of research, however, one might include papers published during the year 1956-57 which are listed and appended hereto.¹ Members of the department participated in the following medical meetings: American Medical Writers Association; The Texas Cancer Conference; The Annual Meeting of the American Medical Association; First Pan-American Cancer Cytology Congress; The International Academy of Pathology; The Society of Pathologists and Bacteriologists; A Regional Conference on Forensic Pathology in Philadelphia; The Annual Meeting of the Richmond County Medical Society, Augusta, Georgia; The Annual Meeting of the Maryland Society of Medical Technologists; Monthly meetings of the Maryland Society of Pathologists; Monthly meetings of the Pathology Section of the Baltimore City Medical Society.

Research in progress includes "Studies on the Pathology of the Cerebellum", "The Relationship between Parathyroid Degeneration and Intravascular Pigmentary Changes in the Basal Ganglia"; investigations are also in progress on "Cardiac Glycogen Storage Disease in Siblings". A number of projects are being instituted in the Division of Cytopathology.

D. The task of completely reorganizing and presenting a curriculum for second year medical students was the primary objective of the Staff. A final evaluation of the

¹ Papers Published 1956-57.

NAGEL, L. R.; WAGNER, J. A.: Venous Angioma as the Cause of Cerebellar Apoplexy: Report of a Case, *Bull. Sch. of Med., Univ. of Md.*, **41**: 64-69, Apr. '56.

WAGNER, J. A., et. al.: The Problem of Cerebral Phlebothrombosis; and Analysis of 22 Cases, *Bull. Sch. of Med., Univ. of Md.*, **41**: 95-108, Apr. '56.

WAGNER, J. A.; SHARRETT, J. O.: Ischemic Hypophyseal Necrosis and Other Pituitary Lesions: Incidence in a Moderately Large Autopsy Series, *Southern Med. J.*, **49**: 671-678, July '56.

SLAGER, U. T.; WAGNER, J. A.: The Incidence, Composition and Pathological Significance of Intracerebral Vascular Deposits in the Basal Ganglia, *J. of Neuropath. & Experimental Neurology* **XV**: 417-431, Oct. '56.

SLAGER, U. T.; KELLY, A. B.; WAGNER, J. A.: Congenital Absence of the Corpus Callosum; Report of a Case and Review of the Literature, *New Eng. J. of Med.*, in print.

problem concluded with a curriculum divided into two portions, the first half year presenting the basic problems of disease and tissue reactivity. The second half of the year concerned systemic pathology and with special consideration of the broader aspects of the fundamentals presented in the first semester.

The schedule of lectures and demonstrations is attached. The curriculum was divided into four basic spheres. The first series of lectures was to orient the student in his thinking; next, a set of histologic preparations to show the details of the pathologic problem. These were presented, supported by prepared lantern slides and were carefully described. A third portion of the curriculum dealt with the presentation of illustrative gross material to support the first two facets. Lastly, the Division of Experimental Pathology served to bring into focus the dynamic aspects of the processes under consideration in the curriculum. In addition, students were urged to read extensively on their own. A list of approved texts and monographs was provided. Each student was required to witness twelve autopsies in the University Hospital and to present a written discussion of any six as a prerequisite for admission to the final examination. Frequent "progress examinations" were given with the weak students being personally interviewed and their problems discussed with a member of the Faculty. A comprehensive oral and practical examination was planned but was not given because of personnel shortage.

As a result of extensive and varied requirements of this curriculum, it was felt advisable to bring to the students certain experts and other support personnel who might serve to strengthen the basic curriculum. These included the following: (1) Dr. Henry C. Feimuth, Toxicologist, Chief Medical Examiner's Office, (2) Dr. Richard Lindenberg, Neuropathologist to the Chief Medical Examiner's Office (head trauma), (3) Dr. Russell S. Fisher, Dr. Paul Guerin and Dr. William V. Lovitt, Jr. on general aspects of forensic pathology, (4) Dr. Charles Wisseman, the relationships of immunologic reactions to disease, (5) Dr. Louis C. Gareis, obstetric pathology, (6) Dr. Llewellyn Ashburn, pathology of the biliary system and liver, (7) Dr. Carl T. Tessmer, the pathology of radiation, (8) Dr. Chapman H. Binford, the pathology of mycoses and the exotic diseases, (9) Dr. Tobias Weinberg, the pathology of sensitization and the "collagen diseases", (10) Dr. Myron S. Aisenberg, D.D.S., three lectures on oral pathology of importance to the physician, (11) Dr. F. K. Mostofi of the Armed Forces Institute of Pathology spoke on the subject of diseases of the genito-urinary tract. (12) Dr. William S. Stone, Dean of the School of Medicine, delivered the principal lectures on parasites.

We are also indebted to Doctors Donald Mark, Robert Solomon, Carl F. Mech, Conrad Acton, Thomas F. Conner, J. M. Ramsey and Milton S. Sacks for assistance in the development of the curriculum. The Sub-Department of Neuropathology took a unit of 8 lectures and demonstrations in the central nervous system with the able assistance of Doctors August Kiel, Robert Moore and Richard Lindenberg. One inter-departmental seminar with the Division of Neurology was presented on the subject of muscular dystrophy.

Clinicopathologic conferences for members of the junior and senior classes were given weekly.

The Department also cooperated with the Department of Physical Therapy in the

presentation of a fundamental orientation course in pathology covering 40 lectures.

CONCLUSIONS

The appointment of Dr. Harlan I. Firminger as Professor of Pathology will no doubt serve to crystallize many of the uncertainties of the past year and his advent will mark the beginning of the second phase in the curriculum redevelopment begun during this fiscal year. The development of a sound research program integrated with additional teaching facilities and with a division for pathologic service seems most desirable. Special pathology such as dermatologic, cytologic and ophthalmic, should certainly be emphasized and most certainly will receive Dr. Firminger's prompt attention.

I wish to acknowledge the contributions of Doctors Kiefer, Gillotte, Slager, Baer, Burkart and Talley to the stability of the academic program and to the efficient maintenance of a service facility which, in the absence of such attention, diligence and devotion, would have been an impossibility. The services of Miss Loretta Hogan and Miss Joan Hodnick, secretaries, have been both meritorious and are acknowledged with thanks. The application and excellent performances of Mr. Louis Jager and Mrs. Anna Diver Bunn of the technical staff are especially acknowledged.

Plans now in progress for the coming year include a broadening of service in cytology, residencies and fellowships in cytology and a training course in cytopathology for pathologists. The sub-department of neuropathology has in progress three research projects and is in the process of developing a postgraduate course for pathologists and an elective course for medical students. Cooperation with the Divisions of Neurology and Neurologic Surgery continues as in the past with postgraduate training, weekly classes, seminars and conferences.

DEPARTMENT OF PEDIATRICS

I. *General Statement of Operating Plan and Ideology*

Pediatrics is of Greek derivation and means "child cure." This term seems archaic in that it does not describe accurately the function and activity of a modern pediatric department. The term "department of child care" would seem to be a truly descriptive term.

Under-graduate and graduate students need to be taught awareness of the precious role of the child in society and their responsibility in safeguarding the physical, emotional and mental health as well as to recognize and treat illness in the child.

It is essential to the very life of a university department that inquiry into the cause and nature of all things affecting the child be constantly encouraged and maintained. Research is an integral part of our departmental soul.

A department of child care, which confines its responsibility to the teaching of assigned students is remiss in its total function. The child is a member of the community and the department must be constantly active in furthering the education of all personnel concerned with child care and bringing about improvement wherever possible.

Essentially, the department is concerned with the welfare of the child. The expression of this concern has developed into a program designed to teach students comprehensive understanding of the child: to conduct basic and clinical research: to effect improvements in general child care throughout the community and to provide optimal services to the child.

II. *Faculty and Staff*

J. Edmund Bradley, Professor of Pediatrics and Head of the Department

Ruth W. Baldwin, Assistant Professor of Pediatrics and Director of the Pediatric Seizure Clinic

Samuel P. Bessman, Associate Professor of Pediatrics

Anna Martha Besterbreurtje, Assistant Professor of Pediatrics

Melvin N. Borden, Instructor in Pediatrics

Lester Harold Caplan, Instructor in Pediatrics

Thomas A. Christensen, Instructor in Pediatrics

Raymond L. Clemmens, Instructor in Pediatrics and Director of the Developmental Clinic

Grange S. Coffin, Instructor in Pediatrics

Joseph M. Cordi, Instructor in Pediatrics

Robert M. N. Crosby, Instructor in Pediatrics

Garrett E. Deane, Instructor in Pediatrics

Leon Donner, Assistant in Pediatrics

Edward G. Field, Instructor in Pediatrics

Jerome Fineman, Assistant Professor of Pediatrics

Abraham Harry Finkelstein, Associate Professor of Pediatrics

Kurt Glaser, Assistant Professor of Pediatrics

Samuel S. Glick, Assistant Professor of Pediatrics
Howard Goodman, Instructor in Pediatrics
Martin K. Gorten, Instructor in Pediatrics
Mary L. Hayleck, Instructor in Pediatrics
Frederick Joseph Heldrich, Jr., Instructor in Pediatrics
Clewell Howell, Associate in Pediatrics
David Josephs, Assistant in Pediatrics
C. Loring Joslin, Professor of Pediatrics
John M. Krager, Assistant in Pediatrics
Arnold F. Lavenstein, Instructor in Pediatrics
G. Bowers Mansdorfer, Associate in Pediatrics
Mary E. Matthews, Assistant in Pediatrics
Israel P. Meranski, Instructor in Pediatrics
William A. Niermann, Assistant in Pediatrics
Leonard Scherlis, Instructor in Pediatrics
Sidney Scherlis, Associate in Pediatrics
William M. Seabold, Assistant Professor of Pediatrics
Henry Murray Scidel, Instructor in Pediatrics
Fred. B. Smith, Associate Professor of Pediatrics
Melchijah Spragins, Associate in Pediatrics
Oliver Walter Spurrier, Assistant in Pediatrics
Alvin A. Stambler, Assistant in Pediatrics
Arnold Tramer, Instructor in Pediatrics
William Earl Weeks, Assistant in Pediatrics
Gibson Jackson Wells, Assistant Professor of Pediatrics
J. Carlton Wich, Assistant in Pediatrics

House Staff

Daniel Anderson, Intern
Edwin Besson, Assistant Resident
Robert W. Gibbes, Assistant Resident
William Hatfield, Assistant Resident
Murray Kappelman, Assistant Resident
Kevin F. McCaul, Assistant Resident
Marvin S. Platt, Intern
Inge Renner, Intern
Karl Weaver, Assistant Resident
Francis Winslow, Assistant Resident
Robert E. Yim, Assistant Resident
Arnold Vance, Resident-in-Chief

III. *Teaching*

The department teaches medical students assigned to the department within the unit system of the school curriculum. Third year students spend six weeks in the department as in-patient clinical clerks. One-third of each group is assigned to the pediatric division of the Mercy Hospital, the remainder to the University Hospital.

The plan of teaching is to use small groups of students with instructors and through free and broad discussion to encourage the students to learn.

During the fourth year the students are assigned to the out-patient areas of the University Hospital for a four week period, where the same philosophy of teaching is maintained.

The department also teaches physical diagnosis to second year medical students and participates in correlative teaching in the second year as well as interdepartmental seminars of the third and fourth years.

The School of Nursing carries on a broad teaching program within the Pediatric Department under the able direction of Dr. G. Sellev, Professor of Pediatric Nursing, Faculty Members of the Pediatric Department are utilized in this phase of teaching.

IV. Research

The following grants-in-aid totaling \$173,980 received to support research and educational activities in the Department of Pediatrics.

DR. RUTH BALDWIN

U. S. Children's Bureau . . .	\$10,000	Maryland Epilepsy Program
*National Institute Health . .	15,354	Effectiveness of l-Asparagine in the control of seizures
* Joint grant with Dr. Charles Van Buskirk, Professor Neurology.		

DR. S. P. BESSMAN

Bressler	\$ 6,480	
American Cancer Society . .	6,000	Formation and utilization of gamma hydroxy butyric acid by brain
Public Health Service	41,500	Brain metabolism and systemic disease
National Cystic Fibrosis Foundation	5,750	
Eli Lilly Co.	5,347	Role of insulin in integration of enzyme systems

DR. J. E. BRADLEY

National Institute Health . .	\$15,330	Lead Intoxication
Mead Johnson Co.	500	Resident Education
Children's Bureau	6,000	Premature Program
Mental Hygiene Society Greater Baltimore	20,000	For support of Mental Hygiene Society Child Guidance Clinic administered jointly by Department of Pediatrics and Psychiatry

DR. J. E. BRADLEY AND R. L. CLEMMENS

Public Health Service	\$ 6,095	Role of ammonia in lethargic state in newborn infant
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DR. J. E. BRADLEY AND G. COFFIN

Eli Lilly\$ 3,000 Penicillin evaluation

DR. M. CORTEN

Public Health Service.....\$ 5,590 Blood ammonia level in erythroblastosis fetalis

DR. E. C. LAYNE

Playtex Park Research Inst..\$19,042

Public Health Service..... 7,992 Terminal respiration in azotobacter vinelandii

The following research projects are in progress in the department:

Studies of effect of benadryl, dilatin and reserpin on behavior of children with organic brain damage and behavioral disturbances

Comparison of experimental medications in seizure control

Mechanism of insulin action

Mechanism of ammonia poisoning

Amine metabolism in liver disease

Studies in cystic fibrosis

Gastric content ammonia levels in newborn

Sweat and saliva electrolyte levels in newborn

Cardiac glycogen storage disease

Hyperbilirubinemia in neonates and indications for exchange transfusions

Study of the anemia of chronic infection

Micro serum bilirubin determinations

Effectiveness of glutamine antagonists in acute leukemia of children

Placental immunity

Blood lead levels according to socio-economic levels

Tetra-ethyl lead intoxication

Effect of lead on mental development

V. Graduate Program

The department participates in the training of rotating interns, general practice residents and pediatric residents. Interns and residents from the Mercy, Church Home, St. Josephs, St. Agnes, Lutheran and Marine Hospitals receive their training in pediatrics at the University Hospital. Requests from other hospitals were received, however, but because of limited facilities they could not be honored. Inclusive of the interns and residents of the University Hospital, there were 69 interns and residents trained. The program is fully approved by the American Board of Pediatrics and the Council on Hospitals and Education of the American Medical Association. Approval from parent certifying boards is also held by the following clinics in the department: Seizure, Child Guidance, Cardiac.

Ten physicians and Fellows were trained in the laboratory under the direction of Dr. Samuel P. Bessman. These men and women were from other medical schools as well as from our own school. Four medical students carried on various research projects under Dr. Bessman.

The Mental Hygiene Society Child Guidance Clinic under the moderation of Dr. Kurt Glaser, Assistant Professor of Pediatrics, continued their monthly evening sessions with practicing physicians. These sessions are devoted to discussion of common emotional problems of children, e.g., school phobias. This clinic has, within the past year, had three graduate physicians training in the clinic: two of these are from Israel and one is of local origin.

Two medical students carried out Summer projects under the direction of Dr. Raymond L. Clemmens.

On March 29 and 30, 1957, a scientific symposium on "Consciousness and the Chemical Environment of the Brain," was held. It was sponsored by the Ross Laboratories and ably organized by Dr. Samuel P. Bessman. This symposium was attended by 100 outstanding investigators from the United States, Canada, England and Puerto Rico.

The Sixth Annual Pediatric Seminar was held on March 31, 1957. This Seminar is designed to present to practicing physicians significant current advances in pediatrics. The Chairman, Dr. Frederick Heldrich, and his committee arranged for presentations by outstanding speakers from Boston, New York, Buffalo and Philadelphia. The Seminar was attended by 227 physicians from Maryland and adjacent states.

VI. *Statistical Analysis Work Done and Service Rendered*

There were 34,000 infants and children seen in the out-patient clinics of the Pediatric Department during the fiscal year, 1956-57. This represented an increase patient load of 2500 over the preceding year. Increases were particularly noticeable in the pediatric emergency room and in the general pediatric clinic. Special clinics such as Child Guidance, Cardiac, Well-baby and Seizure showed increases, but not as marked as in the above mentioned areas.

The increased load has added additional strain to already overly burdened and inadequate facilities.

A total of 1386 infants and children were hospitalized in the Pediatric Department, University Hospital. During 8 of the 12 calendar months the in-patient department operated at a 90 per cent occupancy. This resulted in many patients, in need of hospital care, receiving such care through being maintained in our crowded emergency room for a varying number of hours. Many patients were referred to other hospitals while the majority were treated on an ambulant basis. There exists a critical need for more hospital beds for children. The effort to treat many of our sick children coming from a low socio-economic level on an ambulant basis means that they are too often deprived of the constant, intelligent supervision necessary to restore them to health.

The Pediatric Department has the responsibility of giving pediatric care to the infants born in the University Hospital. Last year there were 2617 infants born.

The Premature Nursery is also under the direction of this department. In addition to providing care for those premature infants born at the University Hospital, it also receives infants born at other hospitals or those born outside the hospital, since this is one of the premature centers in the State. A total of 201 premature infants received care in our nursery during the past year.

VII. *Facilities and Equipment*

Square footage—26,400.

The Department of Pediatrics is located on the 5th floor of the University Hospital. Currently it is allocated 96 beds, however, 26 of these beds were used for a temporary premature nursery. There are seven private rooms, with the remainder divided into four bed cubicles, each unit being subject to isolation. Patient beds, classroom, play areas and offices for the full-time professor, associate and assistant professors, as well as offices for the pediatric nursing professor and instructor are located on this floor. The Department of Pediatrics is responsible for the newborn and premature nurseries on the 6th floor (2,168 sq. ft.) with a total of 81 bassinets. Animal facilities are in the Bressler Building. Out-patient facilities are in the basement on the first floor of the old Out-patient Department (OPD) building. Research laboratories are housed in two rooms on the fifth floor with two small additional laboratories, one in the OPD and one in the Bressler Building.

VIII. *Community Activities*

Members of the Department of Pediatrics participated in numerous activities throughout the community. A partial list of activities of members follows:

NON-SCIENTIFIC PAPERS

Dr. R. Baldwin

Epilepsy—Types of Patients for Residential Care: Silver Cross Home for Epileptics; Kings Daughters: Reisterstown, Maryland.

Correlation of Medical and Educational Facilities for Retarded Children: Salisbury, Maryland.

Advisability of EEG Laboratory and its Applications: Board of Directors, Peninsula General Hospital: Salisbury, Maryland.

Epilepsy: Mothers Club of Rogers Forge School, Baltimore, Maryland.

Dr. S. P. Bessman

Cystic Fibrosis—A Chronic Disease of Childhood: TV-MD, WBAL.

Dr. J. E. Bradley

The Role of the Child Guidance Clinic in Teaching:

Woman's Auxiliary, Baltimore City Medical Society, Baltimore, Maryland

Lead Poisoning in Children: National TV-NBC, New York City; National TV-CBS, New York City; National Radio, Mutual, New York City; Radio, Local stations, New York City; National Radio, CBS, New York City.

Poliomyelitis Vaccination: TV-WMAR, Baltimore; Radio, WBAL, Baltimore.

Mental Health: Radio, WCAO, Baltimore.

Dr. R. L. Clemmens

Polio Prevention: TV-WBAL, Baltimore.

Guard your Health Month: Radio, WCAO, Baltimore.

Dr. K. Glaser

Pre-school Child and Delinquency: Governors Conference, College Park.

Behavior Characteristics of the Pre-school child: PTA of Kindercraft Kindergarten.

The Emotionally Healthy Child and How to Keep Him So: Child Study Association of Baltimore.

The Adjustment of Handicapped Children: Association for Handicapped Children, Annapolis, Maryland.

How to be Effective Parents: Women's Club of Johns Hopkins University.

What Children can Benefit Most from Attending the Children's Guild?: Directors of Baltimore Nursery Schools, Baltimore.

What is the Nature of the Trainable child?: Maryland Society for Mentally Retarded Children.

Pre-school Problems: Children's Guild, Baltimore.

Children's Anxieties: PTA of P.S. 241, Fallstaff.

Mental Health and Prejudice: B'nai B'rith Womens Lodge.

The Father's Role in the Family: North West Cooperative Pre-school Group.

When a Teacher has a Problem Child: State Teachers College, Towson, Maryland.

Sex Education of Children of Elementary School Age: PTA of P.S. 210.

Children's Guild, Inc. Discussion Groups: The Negativistic Phase; Jealousy; Spoiling; Spontaneous Discussions.

Dr. S. S. Glick

Your Child and You: PTA—Beth Jacob School.

Your Child and You: Shaarei Zion Sisterhood.

Dr. M. Gorten

Modern Treatment of Nutritional Anemia: University of Maryland Alumni: Telecast.

The department maintains a Poison Control Center, which enables physicians or parents to obtain information and management regarding harmful substances which may have been ingested, inhaled or have come into contact with the body surface.

Membership on local, state and national committees is listed below. The variety of committees indicates the wide interest which the department maintains in all phases of child welfare.

Dr. Ruth W. Baldwin

Medical Advisory Board of State of Maryland (Department of Motor Vehicles).

Subcommittee on Medical Services for Handicapped Children in Maryland.

Dr. J. E. Bradley

Council on Medical Care, State of Maryland.

Consultant, Baltimore City Department of Health.

Maternal and Child Welfare, Medical and Chirurgical Faculty, Chairman, Pediatric Section.

Central Coordinating Committee on Poliomyelitis Vaccination, Medical and Chirurgical Faculty, Chairman.

Advisory Committee Distribution of Salk Vaccine, Medical and Chirurgical Faculty, Chairman.

State Department of Health Committee on Distribution of Salk Vaccine, Chairman.

Board of Directors, St. Francis School of Special Education.

Board of Directors, Mental Hygiene Society Greater Baltimore.

Board of Directors, Children's Guild.

Teaching Consultant, U. S. Army, Aberdeen.

Chief of Pediatrics, Provident Hospital.

Chief of Pediatrics, Lutheran Hospital

Consultant Pediatrics, Kernans Hospital for Crippled Children.

Consultant Pediatrics, South Baltimore General Hospital.

Maryland State Planning Commission, Committee on Medical Care, Subcommittee on Medical Services and Facilities for Handicapped Children in Maryland.

Subcommittee on Diagnostic and Evaluation Centers for Handicapped Children.

Subcommittee on Mentally Retarded Children.

Regional Committee on Pediatric Education, American Academy of Pediatrics.

Standardized records of maternal and neonatal statistics, Academy of Obstetrics-Gynecology, Academy of Pediatrics, Childrens Bureau support by grants-in-aid.

\$35,000 Josiah Macy Foundations, Childrens Bureau \$50,000 to State Department of Health of Connecticut: Executive Committee.

Medical Advisory Board, Notre Dame College.

Dr. R. L. Clemmens

Advisory Committee, Maryland School for Mentally retarded.

School Physician, St. Francis School of Special Education.

Dr. K. Glaser

Heart Association of Maryland, Public Education Committee.

Maryland State Planning Commission.

Committee on Medical Care, Subcommittee on Medical Services and Facilities for Handicapped Children.

Maryland Commission for the treatment and prevention of Juvenile Delinquency.

Committee on Health and Delinquency, Baltimore Parent Education Council.

Subcommittee on Classes for Parents of Infants.

Committee on Juvenile Delinquency of Maryland, Chapter American Academy of Pediatrics, Chairman.

Dr. S. S. Glick

Chairman Pediatric Section, Baltimore, City Medical Society.

Student Loan Fund, Phi Delta Epsilon.

Medical Fraternity, Chairman.

Tau Alpha Omega Fraternity Convention, Chairman.

1. BALDWIN, R. W.: The new and old in the treatment of epilepsies, *J. Am. Med. Womens Assoc.*, August, 1956.
2. BESSMAN, S. P.: Preparation and assay of oxalacetic acid. *Methods of Enzymology*, **111**.
3. BESSMAN, S. P.: The relation of the krebs cycle of clinical diseases, *Bull. Sch. of Med., Univ. of Med.*, **41**: 1, 1956.
4. BESSMAN, S. P.; SHEAR, S. and FITZGERALD, J.: The effect of arginine and glutamate on the removal of ammonia from the blood in normal and cirrhotic patients, *New Eng. J. Med.* (in press).
5. BORGES, F. J. and BESSMAN, S. P.: Serotonin, *Ann. of Int. Med.*, **46**: 2, February, 1957.
6. BORGES, F. J. and BESSMAN, S. P.: Urinary excretion of 5-hydroxyindole acetic acid, a serotonin metabolite in hypertensive renal-vascular disease, *Soc. Exp. Biol. and Med.*, **93**: 513, 1956.
7. BRADLEY, J. E.: The comparison of BAL (2,3-dimercaptopropanol) and CaEDTA (calcium ethylene diamine tetra acetate) in the treatment of lead encephalopathy, *A. J. Dis. Child., Proc. Amer. Ped. Society*.
8. BRADLEY, J. E.: Don't let your child get lead poisoning, *Parade Magazine*, July 22, 1956.
9. BRADLEY, J. E. and BESSMAN, S. P.: Poverty, pica, poisoning, *U. S. Pub. Health Reports* (in press).
10. BRADLEY, J. E. and MENON, G.: Regurgitation in infants, *South. Med. J.*, **49**: 1317, 1956.
11. CLEMENS, R. L.: Salivary chlorides in the first year of life, *Am. J. Dis. Child.*, January, 1957.
12. CLEMENS, R. L. and BESSMAN, S. P.: The ammonia content of the gastric juice in the newborn infant, *Proc. Soc. Ped. Res.*, June, 1957.
13. CLEMENS, R. L.; SHEAR, S. and BESSMAN, S. P.: Blood ammonia in newborn infant. Submitted for publication in *Pediatrics*.
14. GLASER, K. and EISENBERG, L.: Maternal deprivation, *Pediatrics*, **18**: 636, 1956.

15. GLICK, S. S.: The Herman Seidel story, *Phi Delta Epsilon Med. Frat. Mag.*, 1956.
16. GORTEN, M. K. and JAHN, E. F.: Hemolytic disease of the newborn due to anti-wright (Wra), *Pediatrics* (in press).
17. GORTEN, M. K.; SHEAR, S.; HODSON, M. and BESSMAN, S. P.: The complications of hyperbilirubinemia in the newborn and their possible relation to the metabolism of ammonia, *Pediatrics* (in press).
18. LEIKIN, S. and BESSMAN, S. P.: The effects of various EDTA complexes on coagulation, *Blood*, **11**: 10, 1956.
19. PATTERSON, P. R.; LIPTON, E. L.; UNNA, K. R. and GLASER, K.: Dosage of drugs in infants and children, III Neostigmine, *Pediatrics*, **18**: 31, 1956.
20. SHANE, S. and GLICK, S. S.: Anaesthesia for Frankie, F. A. Davis, 1956.

In addition to the preceding list of publications, scientific papers were presented by members of the department. They were as follows:

Dr. R. W. Baldwin

Workshop of Epilepsy: National Epilepsy League, Inc., Syracuse, N. Y.
 Medical Aspects of Epilepsy: International Council on Exceptional Children, Pittsburgh, Pa.
 Panel member of Symposium "What is the Nature of the Retarded Child?": Maryland Society for Mentally Retarded Children, Inc., Baltimore, Maryland.
 Series of talks on Epilepsy:
 Members of the staff of Rosewood State Training School, Owings Mills, Maryland.
 Public Health Nurses, Southern and Western Health Districts, Baltimore, Maryland.
 Public Health Nurses, Prince George's County.
 Practical Nursing School Class, Prince George's County General Hospital.
 Members of the staff of the Spring Grove State Hospital, Catonsville, Maryland.
 Epilepsy in Public Health Work: Johns Hopkins Hospital School of Hygiene and Public Health, Baltimore, Maryland.

Dr. S. P. Bessman

The Effect of Glutamic Acid Therapy on Mental Deficiency: A Four Year Study on Out-patients, American Association on Mental Deficiency, Richmond, Virginia.
 Factors Affecting the Appearance of Ammonia in the Gastric Juice: American Society for Clinical Investigation.
 The Ammonia Content of the Gastric Juice in the Newborn Infant: Society for Pediatric Research, California.
 Estimation of Citric Acid and Ketone Bodies by the Salicylaldehyde Acetone Reaction: Federation of Biological Sciences.
 Biological Aspects of Mental Disease: AAAS Symposium on Mental Disease, New York City.
 The Clinical Significance of Blood Ammonia: Physiological Chemistry Seminar, Mount Sinai Hospital, New York.
 Etiologic Factors in Mental Retardation: Participant in Ross Symposium, Chapel Hill, North Carolina.
 Consciousness and the Chemical Environment of the Brain: Ross Symposium, Chairman, University of Maryland Hospital.
 Course of Basic Neurology: 3 Lectures, Medical Students, George Washington University.
 Recent Advances in the Understanding and Treatment of Diabetes: Frederick County Medical Society, Frederick, Maryland.
 Ammonia Metabolism: Third Year Medical Students, Georgetown University Medical Center.
 The Chemical Phenomena Associated with Clinical Ammonia Poisoning: Seminar in Biological Chemistry, Johns Hopkins School of Hygiene and Public Health.
 Hepatic Coma: Panel on Hepatic Coma, American College of Physicians, Boston.
 Carbohydrate Metabolism: Department of Pediatrics, City Hospital, Baltimore, Maryland.
 Serotonin Metabolism: Department of Medicine, Lutheran Hospital, Baltimore, Maryland.
 Ammonia Poisoning: Endocrine Clinic, Johns Hopkins Hospital, Baltimore, Maryland.

Dr. J. E. Bradley

Staphylococcal Infections in Children.

Malignancies of Childhood.

Status of Salk Vaccine.

Tuberculosis in Childhood.

Clinical Applications of Electrolytes in Pediatrics.

Common Emotional Problems in Children: Aberdeen Proving Ground.

Staphylococcal Infections in Children: Carroll County Medical Society, Maryland.

Poisoning In Children: West Virginia Pan Handle Medical Society and Academy of General Practice.

Attending Pediatrician: Harriet Lane Home, Johns Hopkins Hospital, Month of November.

Dr. R. L. Clemmens

Salt Depletion as a Complication of an Hereditary Disease: University of Maryland Hospital, Medical Staff.

Sweat and Saliva Chloride Concentrations: Baltimore Pediatrics Research Society.

Congenital Anomalies: Baltimore City Health Department, Western Health District Monthly Meeting.

The Handicapped Child: Postgraduate course of maternal and child health, Department of Obstetrics Nurses.

Dr. K. Glaser

Juvenile Delinquency.

Stealing and Lying.

School Phobia.

Adolescence: Scientific sessions for pediatricians and general practitioners, Mental Hygiene Society Clinic for Children.

Dr. M. K. Gorten

Acute Leukemia in Childhood: Pediatric Staff, Union Memorial Hospital.

Aplastic Anemia: Medical Staff, South Baltimore General Hospital.

Henoch Schoenlein Purpura: Medical Staff, South Baltimore General Hospital.

Acute Disseminated Lupus Erythematosus in Childhood: Pediatric Staff, Union Memorial Hospital.

Anemia of Prematurity, Medical Staff, South Baltimore General Hospital.

Management of the Rh Negative Mother and Her Child: Obstetric Staff, Baltimore City Hospitals.

Treatment of the Erythroblastotic Infant: Pediatric Staff, Mercy Hospital.

Management of the Erythroblastotic Infant: Pediatric Staff, Union Memorial Hospital.

Acute Leukemia in Childhood: Medical Staff, South Baltimore General Hospital.

Iron Deficiency Anemia: Medical Staff, South Baltimore General Hospital.

Consciousness and the Chemical Environment of the Brain: 25th Pediatric Research Conference—Ross Laboratories, Baltimore, Maryland, Discussant of "Bilirubin Encephalopathy".

Diagnosis of Neonatal Jaundice: Medical Staff, South Baltimore General Hospital.

Dr. E. C. Layne

Consciousness and the Chemical Environment of the Brain: 25th Pediatric Research Conference—Ross Laboratories, Baltimore, Maryland, Discussant of "Ammonia Metabolism in the Brain".

X. *Recommendations for Improvement*

It is obvious from the foregoing that this department is rendering extensive and significant teaching, research and service in the field of child care. This work is being done with limited and inadequate facilities. At present crowded conditions exist in our research laboratories, teaching, and service areas.

Hence, recommendations based on departmental committee study are as follows:

There exists a need to develop, within the framework of the Medical School, a realistic and complete center for child care, to meet not only the teaching needs of an anticipated increased number of medical students, but to educate and train adequately those individuals who will provide service and care for a steadily increasing child population (4,800,000 infants born in 1956).

The dynamic growth and emergence of pediatrics as a special discipline has created a significant deficit in the training of physicians and nurses assigned to smaller hospitals. Hence child care centers must offer, within the center, teaching opportunities for these individuals.

The problems of the adolescent and others either need to be created or are in need of urgent further development in teaching, research and service in certain pediatric specialties, such as ophthalmology, cardio-thoracic surgery, neuro-surgery, and diseases of the nose and throat.

It is to be recognized that the child is not a miniature adult, but has different physical, emotional physiologic, and immunologic problems, all of which need to be considered carefully in providing care. The child requires a physical environment, suitable to his physical size and concept of what is familiar and attractive. He needs an environment which does not expose him to emotional trauma, which protects him from infection, and where care is provided by personnel skilled in the management of children.

While the present century has witnessed remarkable developments in the prevention of disease of children, improved nutritional standards and increased knowledge of disease, the need continues for promoting and furthering pediatric research within a pediatric center.

It is recommended that there be created a complete pediatric unit at the School of Medicine, University of Maryland, in which would be housed the following:

A general pediatric out-patient department—this would permit the development of a strong teaching program through simulating as closely as possible in physical construction and function the private practice of medicine. In this unit adequate isolation of patients should be possible. There should be examining areas conducive to good patient appraisal, areas offering ease of meetings between consultant and student, adequate instruction areas, and diagnostic laboratory facilities. Within this unit would also be housed a Child Guidance Clinic which is an integral part of the clinic in teaching pediatric residents and medical students the recognition and treatment of emotional problems of children. There exists, because of the division of medical service and specialties serving the pediatric age group and the adult age group, a need for the creation of an adolescent unit. Adjacent to the general pediatric out-patient department should be created a pediatric emergency room. This unit should be in operation 24 hours a day, as a screening clinic during the clinic day and as an emergency room after clinic hours. The pediatric emergency room should have an adequate waiting area, separate examining areas, and an observation area. The average child is more disturbed at the sight of a helpless, injured or unconscious adult or a woman in the first stages of labor than by the sight of an injured or sick child, since he is accustomed to rely on adults for security. The pediatric emergency room, as well as all other areas

of the pediatric unit, should be so constructed that the child is not exposed to these forms of emotional trauma.

A Central Evaluation and Guidance Clinic for Handicapped Children.—A report by the Professor and Head of the Department of Pediatrics on this problem to a committee of the Maryland State Planning Commission on Medical Care, studying the problems of the handicapped child, states: "The present century has witnessed the conquest and control of many infections, nutritional and environmental diseases. These advances have paralleled the development of strong teaching and research programs by medical schools in these areas. However, during the same period relatively little attention has been given by the medical schools to the problems of the handicapped child. The recognition, counseling and care of these children has been assumed by voluntary agencies, the public health department, and the occasional medical school clinic. These organizations have interested themselves in specific handicaps, without considering carefully the total medical, social, psychologic and educational needs of the child. The child has been treated in parts, particularly that part which is most involved, such as orthopedic, hearing, vision or speech and then for special symptoms as epilepsy, cerebral palsy or emotional disturbances. The teaching of undergraduate and graduate medical students, as well as key ancillary personnel, has also been in this vertical manner."

An additional consequence of the above trend has been the development of restrictive research. Individuals, interested in a specific handicap, have organized themselves into groups and raised sums of money to provide service and research in the specific handicap. While significant advance has been made in certain areas through this approach, flexibility to encourage and to develop investigation into promising unrelated, yet significant areas, is missing.

It seems obvious that a need exists to provide facilities to teach, within medical schools, the recognition and consideration of all the needs of handicapped children and to apply these principles to improve the service to them. Solution to these deficits would seem to lie in the creation, within medical schools, of an evaluation center for handicapped children.

In planning such centers the following points should be considered:

1. Geographic, separate location in a new unit or in an existing unit clearly designated for this purpose.
2. The unit should be under the direction of a person who has understanding of total child needs, preferably a pediatrician.
3. Immediate additional key personnel would consist of a social worker and a psychologist.
4. Medical students, fellows, house officers and medical practitioners would be assigned to the clinic.
5. Intake of patients would be by referral from recognized agencies and professional persons.
6. Patients admitted to the center would have a complete medical, social, and psychologic appraisal.
7. Appraisal of each handicap would be obtained from an appropriate specialist.
8. The director would arrange a group discussion of all concerned personnel for

consideration of the individual, medical treatment, social, psychologic, educational and dispositional needs.

9. Consideration should be given to the use of the medical centers for the training of future teachers of handicapped children. Expansion of the present program is indicated between the Department of Education, University of Maryland and the Department of Pediatrics, School of Medicine.

10. A small number of beds in the University of Maryland should be available for those children who require a more intensive investigation.

11. Consideration should be given to the use of existing institutions, e.g., Kernan's Hospital and Children's Hospital School, for those children requiring long term institutional care. There has been a decline of patient admissions to these hospitals, so that their future appears uncertain if they intend to continue as orthopedic hospitals.

12. These hospitals should complement the evaluation centers and the children should receive the same complete type of care.

13. The centers within medical schools should function primarily as teaching and research units.

14. There should be formed similar evaluation centers in certain key rural areas, under the direction of the State Department of Health. However, there should be a close cooperation between the rural center and the medical school center following the organization of the present epilepsy program.

15. This proposal does not envision a discontinuance of existing service agencies, but rather a strengthening and improving of their operation.

The foregoing envision a truly cooperative effort of schools, public health department and community in dealing with the complex and growing problems of the handicapped child and parent. A successful solution requires the acceptance of the basic philosophy and the subsequent cooperation of many individuals.

This unit would include special pediatric clinics, tentative plans which have been submitted for the development of such a central clinic. It is to be pointed out that one of the things included on the plan is a nursery classroom. This would provide an area for the teaching of individuals concerned with the education of the handicapped children, at the same time it would permit physicians to make appraisals of the special needs which might be involved in teaching these children. Construction of these areas should be such, that physicians may have their offices there. Those who are employed by the School on a geographic part-time basis might be permitted to see private patients.

At the present time, there exists a need to separate hospitalized infants, (from birth to two years of age) from the older children. There is also a need to offer separate facilities for the private and semi-private pediatric patients. It is recommended, that there be a children's (age 2 to 12), surgical and medical hospital unit of 60 beds, of which 15 beds would be for the care of short-term handicapped children. There should be an infant unit (up to 2 years) of 50 medical and surgical beds. Semi-private and private accommodations should be provided for 55 patients. Ten of these beds should be set aside in the adolescent unit for children (12 to 16 years of age). These accommodations should be constructed in such a way as to meet the particular needs of these children. At the same time they are afforded the privacy which their age requires.

In planning for the in-patient pediatric unit, provision should be made for a

number of companion rooms where the mother or substitute may stay with child day and night. These rooms should be provided, not only for private patients, but for those service patients whose condition needs mother care or the constant attendance of an adult. Cubicles should be of sufficient size to accommodate a bed, bedside table and chair. The latter is for the mother so that she may be seated comfortably and hold the child on her lap if his condition warrants, or so that she may sit beside him to read or to play with him. In other words the semi-private ward unit should have space which permits as normal a life as possible for the child confined to his cubicle. There should be a waiting room for mothers, equipped with such conveniences as a place to put wraps, toilet facilities, a drinking fountain, easy chairs and a space where interviews between parents and physicians can be held. Within each pediatric unit there should be adequate admitting rooms, treatment rooms, areas for physical, occupational or play therapy. Ideally, there should be an area where the children may be out of doors; if possible, a fenced-in garden or a roof. In the children's area there should be a nursery school, dining room and toilet accommodations, accessible to all areas wherever the children may be. It is to be remembered that the personnel in the children's ward, although well prepared for the work, cannot give adequate care to the children unless they are working in a physical environment suited to the child.

Professional and non-professional personnel consider the physical environment in which they work as a factor in their satisfaction with their position. This is not purely for their own comfort, but is of consequence because they desire to do the best work of which they are capable in a physical environment planned and operated for the use of children only. Physical environment undoubtedly is a factor in securing and retaining a thoroughly competent staff for the children's unit. Throughout the hospital, diagnostic and treatment areas must be designed to meet the particular needs of the child, for example there should be a recovery room set aside for pediatric patients; a recovery room with physical construction suitable for the child and manned by personnel who understand the particular needs of the pediatric patient. Roentgen facilities should be so designed that the child can go directly to this area without being transported on elevators crowded with adults. Upon arrival, he should see only those professional people who understand him as a child and not be exposed to the sight of seriously ill adults from other parts of the hospital. A unit set aside to perform pediatric micro-bio-chemical determinations should also be created within the general laboratory of the hospital.

A floor of the pediatric building should be set aside for pediatric laboratories devoted to pediatric research. Construction should be such that they have movable partitions to permit increasing or decreasing laboratory size as projects require.

It is recommended that these facilities, for the care of the child, be combined in a new unit to be attached to the newly proposed out-patient building of the University Hospital. They should be constructed in such a manner so that on the first floor of the pediatric building, the out-patient and emergency rooms will bear a horizontal geographic relationship to the adult emergency and out-patient areas, but with essential separateness maintained. It would seem that such a unit can be constructed in a manner to provide the basic pediatric needs expressed in the foregoing and yet at the same time to make use of facilities in the other parts of the general hospital.

POSTGRADUATE COMMITTEE

I. *General Statement of Operating Plan and Ideology*

Medical education, subsequent to graduation from an acceptable medical school involving the granting of a diploma as a Doctor of Medicine, falls into three natural subdivisions.

- A. The first of these is designed to give a groundwork in clinical medicine as represented by an internship and further, to prepare men for specialties, as represented by residencies and fellowships. This type training, of course, is full time and usually involves living in a hospital or other medical institution.
- B. Graduate education, designed for very complete training in a certain branch of medicine and involving an additional degree, is a rarity in this country.
- C. The third type, which is designed to keep a medical graduate abreast of advances in clinical medicine, is usually of an entirely different nature, and it is with this latter type that we are concerned.

Because of the nature of the objective, education of this type is usually given in short courses, without formal credit resulting from their completion. It has been designated Postgraduate Education.

In considering our problem, it must be remembered that we do not have captive audiences available, such as undergraduate students, men attending for credit toward certification, men attending upon orders of some governmental agency, or an industrial plant for which they work.

Also, it must be remembered that we are not sending well-advertised "Star Speakers" to some medically backward community preceded by a great fanfare of publicity and provided with a more than liberal expense account.

On the contrary, our audiences must be obtained from a highly sophisticated group, in competition with other schools and with medical groups holding meetings of their organizations, and frequently heavily subsidized by commercially interested firms such as drug houses and others. A prime example of this is shown in the list of subsidizers of a recent nose and throat meeting in Baltimore.

Problems involved are well presented by Vollen in the A.M.A. publication, *Postgraduate Medical Education in the United States*. Unfortunately, many excellent teachers in medical schools have a completely naive conception of the entire problem because of their lack of experience in administration in this field. Some men cannot bring themselves out of their ivory towers in spite of Osler's statement, "There are many problems and difficulties in the education of a medical student, but they are not more difficult than the question of the continuous education of the general practitioner. Over the one we have some control, over the other, none. The university and the state board make it certain that the one has a minimum, at least, of professional knowledge, but who can be certain of the state of that knowledge of the other in five or ten years from the date of his graduation? The specialist may be trusted to take care of himself—the conditions of his existence demand that he shall be abreast of the times; but the family doctor, the private in our great army, the essential factor in the battle, should

be carefully nurtured by the schools and carefully guarded by the public. Humanly speaking, with him are the issues of life and death, since upon him falls the grievous responsibility in those terrible emergencies which bring darkness and despair to so many households. No class of men needs to call to mind more often the wise comment of Plato that education is a lifelong business."

II. *Faculty and Staff*

Because the courses are short and because no formal credit is granted, it has been the custom in most medical schools to have no permanent faculty in the ordinary sense. Some institutions do have a very limited, full-time staff but, in the main, the great bulk of the teaching is done by members of the different conventional departments in the medical school and this has been the plan used here. At this point, it seems only fair to say that the Committee has, in the main, received excellent cooperation from the members of the faculty and this support given the Committee's efforts has been gratifying. Since its inception the Postgraduate Committee has felt that a laborer is worth his hire and a consistent effort has been made to recompense, insofar as such has been possible, all those teachers whose services have been enlisted. We sincerely trust that nothing will occur that will make this impossible or will impair the effectiveness of our policy in the future.

III. *Teaching*

Because of the definite limitations of our objectives, as expressed in Section I above, our major effort has been directed toward providing review courses for graduate physicians. There have been some deviations from this in that the Committee has organized certain courses that have been of value to men in specialties and men who have desired later certification. As examples, may I mention the course in Surgical Anatomy and the off-campus clinical teaching in Gynecology and Obstetrics which has been done in Salisbury in recent years. Dr. Haskins, Professor of Gynecology and Obstetrics, has told the Committee that in his opinion these have been well received and have been very valuable to the men availing themselves of this opportunity for instruction. The course in the Basic Sciences As They Apply to the Practice of Medicine has been enthusiastically received and, we believe, has been of great value.

IV. *Research*

The Committee has indulged in no formal research as ordinarily conceived. However, we believe that our attempts to present new courses such as those mentioned immediately above, actually do represent research because we think that trials of new ideas such as these with the careful appraisal of their success, might be considered in this category. We do not believe that we should indulge in hastily conceived courses that might result more from momentary enthusiasm than from actual need.

V. *Graduate Program*

The Committee has no program of this type at this time and unless the original definition of Postgraduate Education is changed insofar as it applies to the activities of the Committee, there will be none in the future.

VI. *Statistical Analysis and Work Done and Service Rendered*

- A. Ten-week course at Wilmington, Delaware, for the Delaware Academy of General Practice. Attendance: 50 physicians.
- B. Weekly television show over WBAL-TV.
- C. Twenty-one week course in Basic Sciences. Enrollment: 56 physicians.
- D. Surgical Anatomy course, fifteen weeks duration: 14 surgeons enrolled.
- E. One day seminar for the Maryland Academy of General Practice on December 13. Attended by 75 physicians.
- F. Three-day short course in Industrial Medicine. The response here was only fair. However, I believe that a lot was learned and from conversations with the men present, I believe that, with adjustments, this course can become increasingly valuable. I believe, however, that it will have to be shorter than three days. More intensive contacts with interested men will have to be had and perhaps better planning of the course would be in order.
- G. Scientific session for alumni and Maryland Academy of General Practice, on June 6. This will be lectures and television will be used.
- H. Monthly OB GYN lectures at the Peninsula General Hospital in Salisbury. At the request of Dr. Haskins, Professor of Obstetrics and Gynecology, this will be extended under his supervision to Easton, Maryland, for a trial period of several months. If Dr. Haskins believes that it is valuable then it will be continued for the remainder of the year.

I. *Provident Hospital*

1. Actually I have not been satisfied with our arrangement at Provident and at my request Dr. E. R. Shipley, who has represented us at the hospital in question, has submitted to me a report. I plan to bring Dr. Shipley's remarks before a future meeting of the Committee for such action as they may deem proper.

VII. *Facilities and Equipment*

The Postgraduate Committee has excellent office facilities. In addition, actually upon an experimental basis, the Committee secured television equipment for use in teaching on the campus. This activity, we all know, has received far greater emphasis in many other institutions where far greater resources have been available. The Committee is of the opinion, however, that this is developing satisfactorily and we trust that it can play a greater part as time goes on if our equipment is expanded and if proper personnel for its operation is authorized.

The Committee also has certain photographic equipment which we hope will play an increasingly important part in education as times goes on. This equipment is, of course, purely a supplement to the much more elaborate equipment in the Art Department. We have endeavored in every way to make our facilities available, not only to the medical school for postgraduate education, but to the other professional schools on the Baltimore campus whenever possible and insofar as such was possible.

VIII. *Community Service*

The Postgraduate Committee has been responsible for the public television show, TV-MD, which has been broadcast over Station WBAL-TV in Baltimore for the past six years. It is of interest to note that it has a rating that is considered excellent in the television industry for a public service program. It is of further interest to note that this is the oldest continuous medical program on the air in the United States. The officials at WBAL have expressed the opinion that the program has been very satisfactory, has served a public need, has received excellent public acceptance and they are definitely desirous of continuing this activity. The Committee plans to keep TV-MD on the air.

IX. *Publications*

Because there has been heretofore no current publication that might be available to advertise current activities in the medical school, Dean Stone suggested last year that such a publication be instituted. As a result of this a publication issued weekly and called "CALENDAR OF EVENTS" was started. This periodical is sent not only to men actually on the campus but to hospitals throughout the state. It is gratifying to note that it is posted on many hospital bulletin boards.

Apparently it has met a need because the circulation has gradually grown and now totals 210. I might say that all increases in circulation are as a result of requests for inclusion in the mailing list. Actually, the Committee has invited recipients to remove their names from the mailing list if they did not believe that the "CALENDAR" was of value to them. This has represented a very sizable project and I would like at this point to commend the office staff of the Committee for their excellent work in producing this periodical.

X. *Recommendations for Improvement*

A. Medical Faculty for the Postgraduate Committee

It does not seem advisable to attempt the creation of a special Postgraduate Committee faculty. We have attempted to be helpful in some degree to the department participating by paying lecturers and also making sums available to the department from time to time to assist them in their work. This plan seems to have worked satisfactorily and I do not believe a change is in order.

B. Audiovisual Subcommittee

Audiovisual teaching has become of such great importance that a subcommittee of the Postgraduate Committee was designated some years ago to foster this activity in the Medical School. The Audiovisual Subcommittee, headed by Dr. E. Roderick Shipley, has been responsible for the public television show, TV-MD, which—in my opinion—has been quite successful. I believe that our plan of a rather "homey" show—without too much professional overtone, is much to be desired over the highly dramatic and, frankly I think, artificial shows put on by other institutions. I do not believe we desire or can compete in the field of medical theatricals.

C. Public Relations and Public Instruction

One of the most pressing needs of the medical school, in my opinion, is the engaging of an adequately trained and experienced director of public information and public education. I do not believe that this function should be combined with the function assigned to the Audiovisual Subcommittee. In my opinion the latter is for the purpose of improving teaching methods in the medical school insofar as audiovisual techniques can be helpful. I do not believe that it should be confused with public education and information.

I believe that if the proper man were secured to direct public education and information he should have as a further function the exploring of sources of additional funds, particularly for extra curricular activities of the conventional type. Drug houses and many lay organizations have evidenced great interest and certainly have been most helpful in promoting meetings of state and special societies. Also I believe possible help might be obtained from the Federal Government if the matter were studied intensively and if areas of interest to that group in this type activity could be developed. Certainly, the national societies such as the Cancer Society, the Heart Society and so forth might welcome such help in teaching, etc., as we could give; and in turn they might be willing to view our needs sympathetically.

Respectfully submitted,

Howard M. Bubert, M.D.
Chairman and Director



DEPARTMENT OF PREVENTIVE MEDICINE AND REHABILITATION

The Annual Report will cover changes and developments in the three Divisions of the Department, that is, (A) Public Health and Hygiene; (B) Community Medical Care, and (C) Rehabilitation.

A. *Public Health and Hygiene:*

1. *Personnel:* Faculty members assigned to this division include Dr. Huntington Williams, Professor of Public Health and Hygiene; Dr. Ross Davies, Associate Professor; Dr. Matthew L. Tayback, Assistant Professor; and Lecturers in Public Health. This group was strengthened by the appointment of Dr. Robert E. Farber as Assistant Professor of Preventive Medicine, part-time. Dr. Farber was Deputy Health Officer in charge of the Western Health District. In addition to his giving part of the lecture course to the second year students, he also organized and supervised three field trips taken by each student and served as a consultant in public health matters to students making home visits during their third and fourth year to clients of the Medical Care Clinic.

Mr. George Watson resigned from his departmental position as Associate in Public Health in order to accept a position with the State Department of Health in Michigan.

2. *Undergraduate Instruction:* Instruction of undergraduate students, consisting of a course in biostatistics by Dr. Matthew L. Tayback in the first year, and the courses of lectures in epidemiology and disease control and community medicine in the second and third year, were carried on as in the previous year with the exception of a few changes in lecturers.

Conferences were held between the Head of the Department, Dr. Huntington Williams and Dr. Matthew L. Tayback which led, in the latter part of the year, to a formal application to the United States Public Health Service for a training grant in biometry and epidemiology. It was proposed in this application that there be instituted a program whereby the Department of Preventive Medicine would make available to all Departments in the School, on a fixed schedule of appointments, the services of a trained, clinical biostatistician to assist in the design of projected research and in the analysis of research data. The proposal also envisaged holding a series of seminars for the House Staff and Faculty on the commoner biostatistical problems encountered in medical research. In addition, the faculty members in this Section of Biostatistics and Epidemiology would be selected from those capable and interested in conducting epidemiologic research, utilizing the facilities of the school for the provision of clinical material.

In view of the uncertainty of obtaining public health service grant funds, application was made to the Kellogg Foundation for authorization to use surplus Kellogg Foundation grant funds to establish this Section on Biostatistics and Epidemiology. Such authorization was obtained before the end of the scholastic year.

B. *Community Medical Care:*

1. *Personnel:* Faculty members previously assigned to this division included Dr. Alexander S. Dowling, Assistant Professor of Preventive Medicine; and Mrs. Mary

Brumfield, Assistant in Preventive Medicine. Dr. Joe L. Stockard, Associate in Preventive Medicine, was made Assistant Chief of the Medical Care Clinic replacing Dr. Ray J. Beasley who resigned his position in order to enter into private practice. The services of Mrs. Mary Brumfield were augmented by the appointment of Miss Margaret Hawkins as an Assistant in Preventive Medicine (Social Service). The position relinquished by Dr. Joe L. Stockard, in charge of the organization of the Home Reports and Disposition Conferences, was taken by Dr. Aubrey D. Richardson.

2. *Undergraduate Instruction:* The program of third year students was altered to take advantage of the slight increase of time available so that each student spends eight Tuesday afternoons in Preventive Medicine. Four of these afternoons were spent in examining patients and evaluating their physical disability in the Medical Care Clinic. At the termination of these afternoons, each student selected a patient whom he was to follow in his home until he reported on him in the fourth year.

In the fourth year each student attended a home report conference on four successive afternoons. The attendance to these classes as well as the Disposition Conferences remain unchanged.

The fourth year students continue to visit the Chronic Hospital at Montebello, at first for two afternoons a week and during the latter part of the year one afternoon a week.

C. *Rehabilitation:*

1. *Personnel:* The personnel included previously are Dr. Florence I. Mahoney, Associate Professor of Rehabilitation and Miss Dorothea Barthel, Instructor in Rehabilitation. On October 1, 1956, Dr. Samuel M. Reichel was appointed as Assistant Professor of Physical Medicine and Rehabilitation on a geographic full-time basis.

Dr. Reichel was placed in direct charge of the In-patient and Out-patient Physical Therapy Clinics and what existed of the Out-patient Occupational Therapy Clinic. The year saw the appointment of Miss Ruth Latimer as Chief Physical Therapist together with several assistants. The growth in the attendance of the two Physical Therapy Clinics was satisfactory. Little progress was made, however, in developing the Occupational Therapy Clinic since a Chief Occupational Therapist was not obtained.

2. *Course for Physical Therapists:* In addition Dr. Reichel served as Director of the Division of Physical Therapy with Dr. Gladys E. Wadsworth as Executive Officer. Under Dr. Wadsworth, in conjunction with the Department of Physical Education at College Park, a four year course was established in Physical Therapy leading to a Bachelor's degree. Previously the Junior and Senior years had had to be given at other hospitals. During this year the first junior class was given instruction at the School of Medicine in the Division of Physical Medicine.

Maurice C. Pincoffs, M.D.

*Head of the Department of Preventive Medicine and
Rehabilitation*

DEPARTMENT OF PSYCHIATRY

INTRODUCTION

In describing the major activities of the Psychiatric Institute during 1956-1957, I have found it necessary to include some material on the structure of the institute, its purpose, its program and the steps we have taken in carrying out this program. The present report is essentially a summary of the more complete reports presented to the Director of the Institute by various section heads and other staff members.

During the past year, teaching and research functions have expanded. The inpatient facilities of the institute have been used to the maximum; the percentage of bed occupancy has been close to 90 per cent. The therapeutic program has become stabilized. Dr. Raymond Band and Dr. Charles Bagley have been helpful in setting up a more organized and integrated service. The residency training program has been strengthened by conferences and seminars given weekly by Dr. Otto Will, Dr. Jerome Hartz and by Dr. A. Russell Anderson. Dr. Charles Ward, Dr. William Harris, and Dr. William Fitzpatrick have joined our supervisory staff. The nursing service has been more closely integrated with the therapeutic work of the resident staff, largely through the efforts of our new Associate Director of Nursing, Miss Marguerite Termini and her supervisory staff. Under the guidance of Dr. Klaus Berblinger our clinic services have expanded. Many more patients have been treated and the type of treatment has been more intensive. The emergency service has become a major teaching asset as well as a very busy service unit. Our comprehensive medical clinic which meets in the medical outpatient department has, under the direction of Dr. Sidney Easterling, cared for a large number of patients. Dr. Charles Bagley set up an adolescent clinic to meet the needs of local practitioners and of the courts. The Child Guidance Clinic in the Psychiatric Institute and the Mental Hygiene Society Child Guidance Clinic have reported varied and interesting programs; and I believe, we are beginning to have success in reaching the pediatricians in the community. Our joint efforts with Dr. Edmund Bradley and his staff, have been interesting and productive to both departments.

The Department of Psychology under the direction of Dr. Lester Libo, has had an active clinical, training and research program. It has received accreditation as one of the few Departments of Psychology recognized for graduate training in clinical psychology. Our Social Service Department, under the direction of Mrs. Imogene Young, has gradually organized its service and teaching program. Mrs. Young and her staff have been actively involved in teaching medical students and nurses. Mrs. Young has organized and been the leader of a two-day workshop on the Family and Mental Health. This workshop, organized in collaboration with local social service organizations, was attended by approximately one hundred social workers. The leaders of this workshop were well-known, national figures in the fields of sociology, social work and psychiatry. The Department of Occupational Therapy, under the direction of Mr. Roman Nagorka, has expanded its work with both in- and out-patients. The addition

of recreational therapy and music therapy, we feel, has been most beneficial to patients. With the help of Mr. Boris Margo, several new techniques were introduced in Occupational Therapy.

Our research program, likewise, continues to expand. We welcome Dr. Jerome Merlis, Chief of the Electroencephalographic Department. Dr. Grenell and his group are furthering their work in neurophysiology and biochemistry as applied to the problems of psychiatry. His work on brain metabolism and on the biochemical actions of the tranquilizing drugs, is reaching a wider audience. Dr. Callaway is continuing his work on perception and the autonomic nervous system and on the ascending reticular system. Our project on the assessment of teaching in psychiatry, is well under way with the help of Dr. Harvey Robinson and Dr. Benjamin Pope. The project on the emotional factors of children with poliomyelitis is reaching its fifth and terminal year. Dr. Harvey A. Robinson, the director of this project and his staff are writing up the material for publication. Dr. John Reid continues his work in teaching and in the application of philosophy to the greater clarification and broader understanding of the problems in psychiatry.

We are enthusiastic about our undergraduate teaching program in psychiatry. Interesting developments have occurred in the first year course, some of which are being written up for publication. We are gradually finding ways of enabling medical students to have more direct research and clinical experience with patients in the Psychiatric Institute. This year we have been able to appoint eight medical students to summer fellowships for research and clinical work in various departmental activities. These fellowships have been supported by the United States Public Health Service and by a grant from the Smith, Kline and French Company.

During the past year, with the help of Mr. Boris Margo, we have had two exhibitions of the paintings and drawings of eight Baltimore artists. These exhibitions were in the Psychiatric Institute and were set up to illustrate the steps in the creative process of these artists. The exhibits have created considerable interest locally and elsewhere and we plan to continue them. Dr. Finesinger has just accepted the editorship of the *Journal of Nervous and Mental Disease*. We hope this will turn out to be an interesting and productive departmental venture.

Our staff has been considerably strengthened by the appointment of Dr. Eugene Brody of Yale University, as Professor of Psychiatry. He will take over the responsibilities of our residency training program. We welcome the appointments of Dr. Otto Will as Associate Clinical Professor of Psychiatry, Dr. Jerome Hartz as Associate Professor of Psychiatry, Dr. A. Russell Anderson as Associate Clinical Professor of Psychiatry, Dr. Francis McLaughlin as Instructor in Psychiatry, Dr. William Harris as Associate in Psychiatry, and the members of our resident staff, listed below. We regret the resignation of Dr. Lester Libo, Chief of our Psychology Division.

RESIDENT STAFF

Chief Residents:

Dr. George Longley

Dr. Robert Trattner

Assistant Residents:

Dr. Octavio Aguilar

Dr. Anthony Hordern

Dr. Celestino Casillas

Dr. Murray Kappelman

Dr. Earl Cohen

Dr. Edward Keelan

Dr. William Holden

Dr. Pearl Ketcher

Dr. Frederick Lam

Dr. Sonia Raines

Dr. Adoracion Tanega

Dr. Hector Ramirez-Honey

Trainees:

Dr. Norman Bacher

Dr. Charles Betts

Dr. Jean Coyle

Dr. John Hamilton

Dr. Dennis Jones

Dr. Elaine Jones

Dr. Jack Raher

Dr. Albert Winer

SECTION I

OBJECTIVES OF THE PSYCHIATRIC INSTITUTE

The activity of the Psychiatric Institute is centered in the three areas of clinical service, teaching, and research. The Department of Psychiatry stresses the need to promote a keen and growing intellectual atmosphere in its teaching program, as well as in the areas of study and research that aim to widen and deepen our understanding of human behavior. It has consistently maintained that for high standards in these two areas a competent full-time faculty is a prime necessity.

As its major educational activity the department is engaged in training medical students, residents in psychiatry, nursing students, students in psychology, social service and other ancillary fields to evaluate and treat mental illness. The essential method depends on close supervision of students, which cannot be accomplished without an adequate full-time staff. At the same time the department believes that it must provide the student with a broad spectrum of patients and treatments. This requires a faculty of a multi-disciplinary character.

Clinical service is a major activity of the Institute. In treating hundreds of patients a year, the Institute is recognizing its responsibility to the State of Maryland. But at the same time, it entertains a goal of longer range: the training of professional personnel who can ultimately meet the need of greater and greater numbers of sick people in the State. This training includes skill with preventive measures as well. The activities of the clinical service consist of the in-patient and the out-patient treatment of psychosis, neurosis, and psychosomatic disorders in adults and in children.

Research is considered of great importance by the Department in order to present a stimulating atmosphere for the education of the student. Major emphasis upon methodology is considered necessary in training in medical science and clinical care if

the highest standards are to be maintained. This research orientation is suffused throughout all activities of the department.

A psychiatric department is the most realistic link between the hospital and medical school and the community. Social and interpersonal problems experienced in the community are intimately related to medical and surgical diseases which find their way into the hospital. The department is developing its relationship with the community and the state to advance its preventive program and to assist in developing better continuity of care for patients. Since professional students graduating from the University will function in the community and the state, it recognizes also that they should be prepared for these functions while they are yet students.

The objectives of the training program are: (1) to train the resident to be a competent clinical psychiatrist; (2) to give him training in scientific methodology and research; (3) to give him knowledge in the basic sciences as they relate to psychiatry; (4) to give him training in the field of human relationship; (5) to give him experience in teaching, and (6) to give him methods and experience in the inter-relationships of psychiatry to the other medical disciplines. To achieve these objectives the department takes the responsibility for the following areas of instruction: (1) Clinical service in which the resident works with a variety of in-patients and out-patients in the psychiatric wards and clinics, on consultation service to other departments of the hospital, and in liaison with community, public health, and social agencies; (2) through a curriculum consisting of seminars dealing with topics in the physical, social and behavioral sciences as they relate to psychiatry and medicine; (3) through active participation in research projects; (4) by close supervision carried out through regularly scheduled individual and group supervisory hours. This total curriculum and training experience prepares residents for certification by the American Board of Psychiatry and Neurology.

During 1956-1957, major changes occurred in our undergraduate teaching program. Several additional instructors were assigned in our first year course so that groups of three students could be supervised while working with the patients assigned to them. During the second semester, the students were asked to select a topic for study. These topics dealt with problems brought up in working with their patients. The topics were set up to encourage speculation and experience in dealing with theory; they were read before the class and later distributed to the entire class.

During the second year, the emphasis is on the understanding of psychodynamics and psychopathology as applied to mental illness.

The third year clerkship was lengthened to a three week period for three students at Springfield State Hospital and for four students at the Spring Grove State Hospital. Each student was assigned to a preceptor at the hospital who supervised the student's clinical work and his records. Students presented patients at the staff meetings and assumed much more responsibility than heretofore.

In the fourth year clerkship, the period of night work was extended for each student to two weeks. The student schedule was arranged so that they could attend the staff conference on Friday mornings and the seminar meetings of Drs. Jerome Hartz and Otto Will. The afternoon seminars were increased in number to include meetings led by Mrs. Imogene Young, Dr. Robert Grenell, Dr. Leopold May, and Dr. Anthony Hordern.

Eight students were selected from the classes for summer clinical fellowships, which enabled them to work throughout the three summer months at a stipend of \$200 a month.

The Fellows were Aristides Alevizatos, John Cadden, Michael Fellner, Ramon Roig, Bernice Sigman, and Lois Young of the second year class, Daniel Sax of the third year class, and Adrien Weyn of the fourth year class.

THE PSYCHIATRIC RESIDENCY TRAINING PROGRAM

The Psychiatric Institute is accredited for a three year Residency Training Program. The Institute provides for the training in any one year of thirteen assistant residents and two chief residents. During the current year the department has seven assistant residents and two chief residents. The positions of chief resident are available to psychiatrists in their fourth or fifth year of training. During the current year, the department had six trainees, subsidized by U. S. Public Health stipends.

More intensive supervision has been available to our residents, and the addition of seminars by Drs. Will, Hartz, and Anderson have rounded out the program. More extensive work has been made possible in neurology with Dr. Charles VanBuskirk and with Dr. Jerome Merlis. One of our residents spent three months under the direction of Dr. VanBuskirk. Several residents have become involved in our teaching program. The senior staff has interested several of our residents in research problems. We hope that these programs will all be extended.

The Institute Program Committee under the chairmanship of Dr. Benjamin Pope, has arranged a series of staff conferences at which papers have been presented by prominent psychiatrists, psychologists, and authorities in the ancillary fields. The list of meetings is appended.

SECTION II

IN-PATIENT PROGRAM

The Institute was planned for the upper three floors, divided into six wards with about 104 beds, to be used for in-patients. For psychotic patients, the plan included the use of four wards in which the nursing care and ward management could vary in steps, accommodating to the progressive stages of the patient's illness. One ward was set up for the treatment of psychosomatic and psychoneurotic patients, to fit into the needs of the general hospital, and to be the center of our work with internists, surgeons and medical specialists. The sixth ward was planned for the in-patient care of disturbed children. There is no in-patient service of this kind at present in the State of Maryland. Owing to shortage of space, Ward 4G is at present occupied by the Division of Neurosurgery of the Department of Surgery. Ward 4F is at present used for residents' quarters. We hope that these space problems will be dealt with so that the Psychiatric Institute will be able to carry out its program.

During 1956-1957, the In-Patient Service occupied wards 2F, 2G, 3F, and 3G, with a complement of 62 beds. During this year, the In-Patient Department has been filled to capacity. About 20 per cent of these patients were under the care of private physicians who usually referred suicidal patients and patients with depressions and

panic states. Every patient was assigned to a resident and in most instances, the resident was able to assume complete responsibility for the patient.

Ward 3G was set up for the intensive study of psychosomatic and psychoneurotic patients. This type of ward ties psychiatry directly to the general hospital and to the medical, surgical, and specialty clinics. We are able, in this ward, to directly observe the effect of emotions, situations, and the behavior of the doctor and the ward personnel on the symptoms in the course of medical and surgical illness. From these observations, methods of control and treatment can be tried and taught. The role of the doctor as a team member, with the nurse, aide and social worker in treating the medical and surgical patient can be worked out and taught. During the present year 10 Assistant Residents from the Department of Medicine spent one month on 3G. In addition to Assistant Residents in Medicine, members of other clinical departments—Drs. Van Buskirk, Woodward, Robinson, Buxton, Haskins, Hull, and other staff members—have seen patients in consultation on 3G. Drs. Lisansky, Hartz, and Reed have taken an active role in working with patients and in teaching. Dr. Charles Betts has been very helpful in trying to relate the work of 3G with problems in medicine and in surgery.

During the past year 507 patients were admitted to the in-patient service. The average bed occupancy was 86 per cent, which was above the 82 per cent level of occupancy set by the hospital. The total number of patient bed days was 19,461. The bed occupancy has varied little from month to month. The percentage of free service has been kept well within hospital policy by carefully planning and administering our admission policy. There are no comparative figures from the University Hospital available to indicate the exact percentage of free service. Dr. Charles Bagley has done an excellent job in setting up and carrying out these policies.

Most of the patients admitted come in as institute patients and are able to pay the regular institute charge for room and board. Since January the all-inclusive fee was eliminated and patients in the institute pay the regular charge for ancillary services. This has increased our income, but no figures are available to indicate to what extent. About 15 per cent of our patients are admitted as the private patients of our staff physicians. We have been fortunate in avoiding many of the pitfalls of the "open" system by giving hospital privileges to our part-time teachers and supervisors. All patients are assigned to our resident staff or students and in this way all patients are available for teaching and supervision.

Between 60 and 70 per cent of our in-patients have psychoses, with a preponderance of schizophrenic patients. During the past year we have admitted several adolescent patients and children. These admissions were in response to community need and have pointed out the necessity for a children's in-patient service. All patients are treated by psychotherapy and approximately 20 per cent receive intensive psychotherapy over long periods of time. We advocate the planned use of tranquilizing drugs and the use of insulin and electric shock when needed. Studies are being carried out in the in-patient service on reactions to drugs, autonomic nervous system functioning, group therapy, and on the social structure of the ward.

In addition to the specific therapies we recognize the influence of the ward, its organization and the interrelations of the professional staff on the symptoms and behavior of the patients. In light of modern trends in psychiatric therapy we are

exploring the usefulness of "milieu" therapy. The question here is how we can best use the hospital environment for treatment purposes. We rely heavily here on the nursing service, on the contribution of the ancillary services of occupational therapy, recreational therapy—and are exploring with our social service department the use of the family as a therapeutic agent.

During the past year more patients have been admitted from the general hospital—mostly as free patients. We have had several admissions from the Student Health Department at College Park and from the State Hospitals. We plan to explore our liaison with the State Hospitals and to also set up joint projects and research ventures. Dr. Callaway has already initiated such projects at the Spring Grove State Hospital.

Our original plan called for the use of Ward 4G for the care, treatment, and investigation of the problems of disturbed children. This ward was visualized as being the in-patient section of our child guidance clinics. This would be a unique service and no similar facility exists in Maryland. After opening the new child guidance clinic in the department of pediatrics, we felt that our next step was the opening of this ward. We were unable to do this and at present, 4G is occupied by the Department of Surgery.

The children's in-patient service was set up with 14-18 beds to allow for both long and short term care. The ward was designed with ample recreational and school space and each room was set up to be a combination living room and bed room. The ward can be set off in sections to deal with different groups of children with a variety of children's problems. Our plan was to have two ongoing groups of children for intensive study in the in-patient unit. During the past year we have had to admit 6-8 children to our adult wards because of community need. This ward together with our child guidance clinics would make it possible for psychiatrists, pediatricians, students, social workers, psychologists, and other personnel to work in child psychiatry.

SECTION III

OUT-PATIENT CLINICS OF THE PSYCHIATRIC INSTITUTE

The Adult Out-Patient Clinic of the Psychiatric Institute is the successor to the old Mental Hygiene Clinic which was situated in the clinic building on Greene and Lombard Streets and at that time, represented the Department of Psychiatry of the School of Medicine, University of Maryland. With the opening of the Psychiatric Institute in November, 1952, the Psychiatric Out-Patient Clinic moved into the new building at 645 West Redwood Street where the Adult Out-Patient Department occupies the main floor and part of the first floor and the Child Guidance Clinic occupies part of the Terrace Floor.

1. *Adult Out-Patient Psychiatric Clinic.*

During the past year 1175 new patients were seen in comparison with 897 seen in 1954 and 1116 in 1955. The number of treatment hours in 1956 was 5614, an increase over 4580 treatment hours in 1955, and 4454 treatment hours in 1954.

The average number of patients in active treatment is 178 per month. In addition to these patients, 216 new patients and 761 return visits were registered by the Comprehensive Clinic, which since January 1, 1956, has come under administrative supervision of the Adult Out-Patient Clinic.

During a typical month last year, thirty-six physicians were seeing a varying number of out-patients, the heaviest load being carried by the senior resident on the out-patient service and five assistant residents who were assigned for the major portion of their Institute activities to the treatment of out-patients. The other therapists included senior staff members, trainees, and students, supervised by the teaching staff. Among the trainees were eight psychiatrists from other psychiatric hospitals in the community.

2. *Brief Contact Clinic.*

The Out-Patient Department also provides the services of a Brief Contact Clinic. Patients admitted to this clinic are those who for a variety of reasons seem not suitable for intensive insight psychotherapy, but derive benefit from a continued dependency relationship and identification with the clinic as such. The Brief Contact Clinic also sees patients who at one time or another were greatly disturbed, but who are able to function on a socially acceptable level.

3. *Wednesday Night Clinic.*

This clinic which meets every Wednesday between seven and ten, is staffed by psychiatrists from other psychiatric hospitals which do not have out-patient facilities for the training of their staff members and thus, furthers the training potential and accreditation of these institutions. The Adult Out-Patient Clinic provides three instructors for individual supervision. Patients admitted to the Night Clinic are those who are unable to come during the day. Recently, the training facilities of the Night Clinic have been extended to selected physicians who are not psychiatrists, but in their individual fields recognize the need for training in psychiatric principles and methods of approach. This clinic was instrumental in helping the Spring Grove State Hospital and the Springfield State Hospital obtain their accreditation for a three year training program.

4. *Clinic for Personality Disorders.*

This clinic was organized in 1955, under the direction of Dr. Manfred Guttmacher. It was set up as a clinic for dealing with the problems of delinquency and problems referred to the Institute by the courts, the Big Brother League, and other social agencies. The clinic during 1956 used individual and group psychotherapy in several series of psychopathic patients. Weekly seminars have been held with probation officers. The clinic has a close working relationship with the Patuxent Institute.

5. *Clinic for Alcoholic Patients.*

This clinic, under the direction of Dr. Isadore Tuerk, meets Saturday mornings. It is supported in part by the State Department of Public Health. Patients are treated individually and in groups. One purpose of the clinic is to provide intensive therapy with a limited group of patients, who are at the same time studied psychologically and physiologically. Patients seen at this clinic can be admitted to the in-patient department when necessary for more intensive treatment and study. The clinic program is related to Dr. Robert Grenell's study of the effects of alcohols on central nervous system functioning, supported by the National Research Council. Group treatment is used for most of the patients. This year several seminars are planned on the diagnosis, treatment and care of alcoholic patients for members of the police force. During the year approximately 50 patients were receiving individual and group treatment.

6. *Adolescent Clinic.*

This clinic meets two and a half days each week. Forty-one adolescent patients have been seen in a total of 324 hours. Six of these patients have been treated by intensive individual psychotherapy. The others have been seen through the diagnostic phase. Some of them have been admitted to the Psychiatric Institute for more intensive study and treatment. This clinic meets a community and a state need; there is no other facility in Maryland which provides this service.

7. *Comprehensive Clinic.*

For the past three years this clinic has been meeting every Monday and Friday afternoon in the Medical Out-Patient Department under the supervision of Dr. Sidney Easterling. Psychiatric referrals from the University Hospital Out-Patient Departments are seen in this clinic. It has become an active teaching clinic, and is fully utilized in the teaching program for senior students. This clinic is an admirable liaison between psychiatry and the other medical specialties. During the past year 216 new patients were seen with a total of 761 return visits.

CHILD GUIDANCE CLINIC

The Child Guidance Clinic was organized in 1928 as a demonstration clinic and supported by the Commonwealth Fund and later, by the Community Chest. Under the direction of the late Dr. H. Whitman Newell, the clinic continued the traditional Child Guidance policy of offering intensive treatment for a limited number of carefully selected patients. The clinic was recognized as a training center by the American Association for Child Guidance Clinics and acquired the reputation of being an excellent place for training child psychiatrists. The same policy continued when the Child Guidance Clinic moved to its new quarters in the Psychiatric Institute.

Intensive individual treatment remains the preferred treatment for most of the children and their parents. The clinic has begun to expand and in 1956 included the resident staff among its therapists. The psychologic services are being expanded by the addition of a psychologic intern. In addition to Drs. Jaffe and Atoynatan, seven members of the house staff treat children under supervision. Two residents from the Spring Grove State Hospital and from the Springfield State Hospital, one resident from the Sheppard Pratt Hospital, and three child psychiatrists from the community work at the clinic. The therapists receive careful supervision and attend frequent diagnostic and case conferences.

During 1956, 206 patients were seen with a total of 2736 hours spent in face to face interviews; 175 requests were referred to other agencies (several children were referred to the Psychiatric Institute for treatment). This aspect of our program will be held in abeyance until Ward 4G is opened for the Children's in-patient service. In treating patients, intensive psychotherapy is being supplemented by abbreviated methods of individual treatment and by the use of group activity and group therapy methods for children of different ages. The work with parents includes group therapy and guidance. Research in the development of standardized therapeutic methods and on the mother-child interaction is under way.

MENTAL HYGIENE SOCIETY CLINIC FOR CHILDREN

The Mental Hygiene Society Clinic for Children was set up as a special clinic run jointly by the Departments of Pediatrics and Psychiatry in the Pediatric Out-patient Department. The purpose of the clinic was to offer service to the Department of Pediatrics, to pediatricians, and to the community, with emphasis on caring for the type of patient which would fall within the domain of the pediatrician. The Mental Hygiene Society of Greater Baltimore, Inc. undertook to provide the sum of \$25,000 a year for five years to support the professional personnel in the clinic. The clinic was opened in January, 1954, with a staff of a half-time psychiatrist, a full-time psychologist, and a psychiatric social worker. The clinic is under the direction of Dr. Marvin Jaffe.

Since it has been open, the clinic has been treating an increasing number of children, about half of whom have been referred from the Department of Pediatrics and the other half from the pediatricians in the community. There have been many evaluations and consultations with social agencies in the community. The intake policy has continued to be that of accepting children up to 12 years of age referred by parents at the suggestion of pediatricians or other physicians working with children. In addition to clinical service, the clinic has been very active in teaching, and several research projects have been started.

During the past year the clinic has had a total of 177 referrals, 63 from the pediatric clinic, 64 from private practicing pediatricians, the remaining 50 from other out-patient clinics and general practitioners. A total of 133 patients, 75 boys and 58 girls, have been treated, most of these being between the ages of 5 and 10. About 60 per cent of those referred are children with behavior disorders, the remainder having psychosomatic problems, mental deficiency or brain damage. Approximately half of these had been seen as long-term treatment cases being treated for six months or longer, the rest have been seen for diagnostic studies and brief therapy. As of May, 1957, we have 53 in active treatment at the clinic and 44 awaiting evaluation.

A substantial amount of staff time is spent in teaching third and fourth year medical students, pediatric residents, and pediatric interns. Junior and senior medical students, while on the pediatric service, spend time in lecture and discussions in the clinic. The emphasis in these discussions is on what the pediatrician can do himself and what should be referred to a psychiatrist. Consideration is given to the emotional factors and attitudes which play a role in the doctor-patient situation and in the parent-child situation.

Pediatric residents also rotate through the clinic and are given the opportunity of observing interviews and psychologic testing. The work with patients is done under supervision. The resident is encouraged to bring up problems from his own pediatric experience for discussion. Supervision is aimed at enabling the pediatrician to appreciate those methods, techniques and devices which are useful in practice.

The staff members of the clinic have been active in consultation with pediatricians in several settings. Dr. Glaser attends the Well-Baby Clinic and also visits on the pediatric wards. Drs. Glaser and Atoynatan have been especially interested in hospitalized children with psychosomatic problems.

A series of night meetings each month have been organized to which local private practicing pediatricians have been invited. This year several topics such as reading disabilities, problems of adoption, and juvenile delinquency have been the subject of an evening's discussion. These meetings have been well attended by pediatricians as well as by social workers, psychologists, and students.

SECTION IV

RELATIONS WITH OTHER INSTITUTIONS

University Hospital

Our work in the rest of the hospital consists primarily of clinical work and undergraduate and graduate teaching. Since 1951, we have had an active consultation service for ward and for private patients. At present the ward consultation work is under the direction of Dr. Klaus Berblinger. During the current year 140 consultations were seen. The breakdown according to services requesting consultation is as follows: medicine 72 per cent, surgery 9 per cent, obstetrics and neurology 6 per cent each, neurosurgery and pediatrics 2 per cent each, and gynecology, urology, genitourinary service 1 per cent each.

Dr. E. T. Lisansky has been of great help in teaching emotional factors in medical disease. It has been our experience that the teaching of emotional and personality factors in the etiology of disease, and in the treatment and management of patients is much more effective when done by the physician who has the over-all responsibility for patient care. Dr. Lisansky's involvement on Ward 3G and in the first and fourth year teaching has made him invaluable as a teacher of medical students. With the cooperation of Dr. Woodward, an Assistant Resident in Medicine spends one month on ward 3G. Dr. Julian Reed has strengthened our liaison with the Department of Medicine.

We have been grateful for the opportunity of working with Dr. Charles VanBuskirk. During the past year he has been generous with his time and his talent in teaching and in clinical work. He has been helpful to Dr. Grenell in discussing joint problems and has undertaken some investigative work with Dr. Callaway. During 1956-57, Dr. VanBuskirk gave a review course in clinical neurology attended by our resident staff and has supervised one of our assistant residents rotating in his division. He has been active as a consultant on 3G. Dr. Jerome Merlis has been interested in our work and is collaborating with Dr. Grenell in research.

The Department of Medicine has cooperated in our fourth year teaching program. In 1950, Dr. Pincoffs first gave us permission to have our fourth year students in psychiatry work with patients on the medical wards. This program has continued with the collaboration of Dr. Woodward.

Our relations with the Department of Surgery were informal up to two years ago when Dr. Nathan Schnaper was assigned to the surgical service as a part-time consultant. Dr. Schnaper attends surgical rounds, sees surgical consultations and is available for teaching. We would like to expand our clinical services in surgery and eventually should like to invite surgery to have an assistant resident rotate through ward 3G. Dr. Kent Robinson, in 1954, was assigned as a consultant to the obstetric and gynecologic

services. His duties are to attend staff meetings and to be available to the students and house staff for psychiatric consultations. Dr. Robinson has long been interested in the emotional problems of these patients and is an excellent teacher. This year Dr. Charles Betts expanded this aspect of our program.

We have enjoyed an active and productive collaboration with Dr. J. Edmund Bradley and his staff. He has shown great interest in our Child Guidance Clinic, and has encouraged us to work on the pediatrics wards and clinics. We have been able to receive support from the Mental Hygiene Society of Greater Baltimore, Inc., for a child guidance clinic in the Pediatric Department, under the joint direction of Pediatrics and Psychiatry. Dr. Bradley has been a collaborator in our study of the emotional factors in children with poliomyelitis—a project supported by the National Foundation of Poliomyelitis. Pediatric residents rotate through the Child Guidance Clinic and last year we had a joint residency in pediatrics and psychiatry. Child psychiatry is taught students as part of the teaching programs of both departments. We have applied for additional teaching funds from the National Institute of Mental Health for the support of two fellowships for pediatricians during one year of training in child psychiatry. We look forward to much more collaboration when the psychiatric in-patient ward for children is opened.

In 1951, Dr. Huntington Williams invited Dr. Finesinger to participate in his course on public health given to the fourth year class. The sessions consisted of a discussion of reports on home visits by the students. Subsequently this course was expanded into having every student make a home visit and report to the group. In 1953-54, a program was worked out with psychiatry so that this course could be given during the time the students were in psychiatry. We felt that this was an opportunity for relating psychiatry to public health and preventive medicine. When Dr. Pincoffs became Professor of Preventive Medicine, this program was tied in with the Medical Care Program and has continued as such. At present, a group of twelve students spend one afternoon a week in discussing the reports made by their colleagues on their visits to patients in the family care program. This program is attended by Mrs. Imogene Young, and other members of our department.

Department of Psychology

During the past four years we have had an active liaison with the Department of Psychology at College Park. A program was arranged with Dr. Bishop of the Student Health Service for our Department to furnish consultation service in psychiatry to the Student Health Service at College Park. Dr. Marion Mathews, Instructor in Psychiatry, spends one half day a week working directly with the psychologists in the Student Counselling Program in seeing students and patients. We should like to expand this program and include training and experience in counselling as part of our Residency Training Program. Since the Psychology section in our department has been accredited for training of clinical psychologists we are working out a joint program with the Department of Psychology.

The geographic proximity of the professional schools on the Baltimore campus has made it possible for the Institute to undertake joint teaching and research programs

with several professional schools. We have been working with the School of Law, and the School of Nursing.

School of Law

During the past two years we have been collaborating with several members of the faculty of the Law School on a program concerned with the interrelated problems of Medicine and Law. In 1953, Dr. Manfred Guttmacher, Chief Medical Officer in Psychiatry of the Supreme Bench, was appointed Associate Clinical Professor in our department. With the help of Dean Howell and Professor Whitting Farinholt, a joint elective course was given to senior students in the School of Law in 1954-55. Drs. Finesinger, Guttmacher, and Lisansky and other members of the Department of Psychiatry participated in a similar course last year. Additional time was allowed for the law students to visit the Psychiatric Institute and to observe interviews with patients. In February a public lecture was given by Dr. Herbert Wechsler, Professor of Law, at the Columbia University, sponsored jointly by the School of Law and by the Psychiatric Institute.

School of Nursing

Since 1950 the department has participated in the teaching of undergraduate and graduate nurses. Dr. William Fitzpatrick, Dr. Charles Bagley, Dr. Greenhill, and Dr. Finesinger have given undergraduate courses in the School of Nursing and in the College of Special and Continuation Studies. One of the major interests of the department has been to define the roles of ancillary personnel in the treatment team. During the present academic year our seminars with nurses have focused on a clearer delineation and definition of the nurse's role. Several of the theses of the students working towards their master's degree in nursing, deal with this topic. Dr. Finesinger and Miss Fernandez are jointly interested in this area. We have felt that our work with the School of Nursing is productive in the areas of nursing education; it is also useful in attracting nurses of high quality for service in the Institute. During the first semester of 1956-57, a series of seminars was held by Dr. Finesinger with the students who are working for a master's degree in psychiatric nursing in the graduate program. During the current semester, Drs. Reid, Grenell, and Callaway are leading seminars with students for the master's degree.

Department of Public Health

We are working on several projects in collaboration with the State Department of Public Health. During the past five years we have been conducting a joint program on the in-service training in mental health for public health nurses. This program is under the direction of Miss Florence M. Burnett, who holds appointments in the School of Medicine and in the State Department of Public Health. The In-Service training program attempts to increase the nurse's awareness and understanding of human behavior, to develop skill in the use of interpersonal techniques, and to work out ways and means of evaluating the nurse's training. Miss Burnett is working on methods for describing the nurse's performance in the field and evaluating changes in her behavior in an attempt to determine the effectiveness of the methods of teaching. Each month a group of six nurses spend one week in the Psychiatric Institute for instruction. This

group has been previously observed by Miss Burnett in the course of their work in the counties. After a period of training they are again observed at work. On the basis of these observations, attempts are made to evaluate the effectiveness of the program. Since this program was started at least 200 nurses have participated and various types of evaluation studies have been undertaken.

The State Department of Public Health which supports our clinic for alcoholic patients described in Section I, has been interested in setting up seminar meetings and workshops at the institute for psychiatrists and other personnel working in alcohol clinics throughout the State. In 1955-56 a special workshop was held with the collaboration of Mr. Joe Dellinger, of the State Service. Dr. Roger Waterman has had a series of weekly meetings with the probation officers of the Supreme Bench of Baltimore at the Psychiatric Institute. These meetings have been seminars on methods of dealing with specific problems shared by the probation officers. Dr. Klaus Berblinger has been a consultant at the tuberculosis hospital at Mt. Wilson for the past two years. He has been visiting weekly as consultant, and has held a series of seminars on the problems of patients with tuberculosis and on the psychiatric factors in the treatment and management of patients with tuberculosis.

State Department of Mental Hygiene

One of our major responsibilities has been to work with the hospitals and the programs of the State Department of Mental Hygiene. Dr. Finesinger is secretary to the Advisory Board of the Mental Hygiene Department by virtue of his position at the University of Maryland. Many members of the State Department hold appointments on our staff. Dr. George Sutherland, an Associate Professor in our Department, is in charge of education and research in the State system. Dr. Isadore Tuerk, Superintendent of the Spring Grove State Hospital, Dr. Irene Hitchman, Clinical Director of Springfield State Hospital, and Dr. Charles Ward, Superintendent of the Crownsville State Hospital, are on our staff and collaborate on our teaching program. Our third and fourth year students do some of their psychiatric work at the State Hospitals where there is an opportunity for examining and studying a variety of psychiatric patients. The chief advantage of the State Hospitals for undergraduate teaching is that it is possible for students to assume complete responsibility for the study and care of many types of patients. At present, during the third year, groups of three students take a three week clerkship at the Spring Grove and Springfield Hospitals. The teaching staff at these hospitals is supervised by members of our own staff who go out with the students to the hospitals and help organize their programs.

Our staff and students have participated in teaching and in research projects at the State Hospitals. Mr. Philip Vail, Instructor of Medical Psychology, teaches our students at the State Hospitals methods of dealing with disturbed patients. Dr. Enoch Callaway, Assistant Professor of Psychiatry, has been consulting with Dr. Kurland on the effects of thorazine and serpasil and other drugs on psychotic patients. Dr. Berblinger, Associate Professor of Psychiatry, has been conducting a series of seminars during the past year at Springfield State Hospital. Dr. Virginia Huffer has been teaching third year students and participating in resident teaching at the Spring Grove State Hospital.

We have tried to bring State Hospital people into our own department as teachers and workers. Dr. Berblinger has been conducting a clinic every Wednesday evening which is set up primarily for State Hospital psychiatrists. As many as ten to fifteen State Hospital psychiatrists come to the University and treat patients under supervision. Dr. Isadore Tuerk, Superintendent of Spring Grove State Hospital, is consultant to our clinic for alcoholic patients in which individual and group therapy is used. He has visited our wards and has conducted a seminar on psychotherapy in manic patients. We are making tentative plans for work on the social structure of the family in connection with a projected study at the Rosewood Training School. A research club has been organized by Dr. Finesinger for discussions of continuing psychiatric projects in the State and other Psychiatric Hospitals. The first meeting of this group was held in June, 1957. Dr. Finesinger has been an active consultant at the Rosewood Training School in an attempt to help with its program.

SECTION V

RESEARCH PROGRAM

The research program has expanded in many areas during 1956-1957. We have been fortunate in receiving continued support from national and local organizations, without which our program would be extremely limited. During the past year our total support from non-university sources has been approximately \$320,000 of which approximately \$32,000 has been allocated to the University of Maryland as overhead. Over 60 per cent of these funds are allocated for research projects (see Table I). These funds have been useful in bringing into the department trained investigators who have been helpful in the service and teaching programs and have been instrumental in building up an atmosphere of inquiry and research.

Our major research interests lie in understanding the factors which make for mental illness and maladjustment, in the ways and means of curing and helping people with mental illness, and its prevention. Dr. Grenell's work on brain metabolism, biochemistry and neurophysiology and Dr. Callaway's work on perception and the automatic nervous system represent one aspect of our efforts in correlating the physical and biochemical with the psychologic factors. The work on drugs with Drs. Klee and Silverstein leads into studies in psychology and sociology which are also exemplified by the studies of Drs. Libo, Pope, Finesinger, and Robinson on group psychology and on the teaching process. The broader interest in values and psychiatric theory are seen in the work of Dr. Reid. A brief description of the major research areas follows.

BIOCHEMICAL STUDIES

This work has been carried out under the direction of Dr. Robert Grenell. He has been assisted this year by a full time staff of Dr. Leopold May, Mr. Elmar Einberg, Mrs. Nancy Eidman, and a part-time staff of Mr. Myron Wolbarsht, Mr. Daniel Sax, Mr. D. Brown, and Dr. Mitoji Miyazaki. This program has been supported primarily by grants from the National Institute of Mental Health, the Office of Naval Research, and the U. S. Air Force Research and Development Command. A brief account of the more recent phases of the work is given below.

Adenosinetriphosphate (A.T.P.) and Chlorpromazine Studies. The most recent developments in this area are concerned with cell fractionation. Pieces of brain from control rats, and from rats injected with chlorpromazine are centrifuged at high speed so that neurons are broken into four layers. These layers are not completely pure fractions, but by nature of the majority of their contents are referred to as nuclear, mitochondrial, microsome and supernate. ATP was measured in each fraction. It was found that the increase in ATP occurred in the microsome layer. This is of particular interest since existing evidence indicates that the microsomes are concerned in protein synthesis. Since previous experiments showed that chlorpromazine causes a decrease in cerebral ribonucleic acid (RNA), it becomes reasonable to suppose that the system involved in the energy changes (associated with the ATP increase) may be an enzyme system which is an essential part of the protein synthetic mechanism. As a further step in these studies, measurements of glutamin-oxaloacetic-transaminase reaction have been made on brain homogenates in the control and chlorpromazinized animals. The transaminase is not significantly inhibited by the chlorpromazine.

Recent work on the energy and electron transport factors has concerned measurements of Diphosphopyridine nucleotidase (DPNase) seen in the hypothalamus (relative to the concentration in other areas). It is felt that this is related to the transfer of acetyl radical and not merely to the destruction of Diphosphopyridine nucleotide (DPN).

Malononitrile. Further work has been done on the ultra-violet studies of neurons from animals injected with malononitrile. The induced qualitative intracellular changes (presumably) caused by an increased nucleoprotein were reported in 1956, but only recently has it been possible to obtain quantitative data. The microdensitometric measurements leave no doubt that "aged" aqueous malononitrile solutions dramatically increase neuronal density (at 260 and 280 m).

Insulin Studies (in collaboration with Dr. Merlis). Recent experiments have shown that following systemic injections of shock amounts of insulin it is possible to record at least three simultaneous cerebral responses not related to blood sugar levels. The findings show: (a) an increase in the cortical response to direct electrical stimulation; (b) a decrease in the evoked auditory cortical response to a click stimulus; (c) no significant alteration in the response of the medial geniculate body to the click.

It would appear that the decreased cortical auditory response is not the result of a direct effect of insulin on the auditory system. (These results suggest that the effect of insulin is indirectly intracortical.) On this basis it may be postulated that the insulin effect is on a center of a lower anatomic level in the central nervous system (CNS)—a center which projects fibers up to the cortex. These fibers have a special role to play in the response of the cells to afferent input. In other words, there is the possibility that a mechanism exists here which is basic for normal sensory discrimination and perception in the organism.

Analysis of Post-Mortem Brain. Studies are being carried out on pieces of brain left standing in air, nitrogen, or in the dead animal for increasing periods of time. The post-mortem tissue is being used to follow progressive anoxic-anemic chemical changes in the cells. Two important observations have been made: (a) although there is a steady decline, ATP in significant amounts is still measurable as much as thirty minutes after

death; (b) glutamin-oxaloacetic-transaminase is still at the normal level three hours after death.

Relationship Between Autonomic Activity and Perception. Dr. Callaway's group has continued their work on the problems of perception (narrowed attention) and the factors which account for changes in the state of awareness. This work has been carried out with the assistance of Dr. Klee, Dr. Jones, Mr. Parker, and Mr. Alexander. The work has been supported in part by the U. S. Public Health Service and by the Army Chemical Center. Some of the studies are listed below.

Studies on time in perception. An investigation designed to detect periodic discontinuity in attention.

Drug studies. Continued investigation of effects of drugs on cognitive and perceptual functions.

Patient studies. Preliminary studies on correlations between clinical status, measure of autonomic function, measures of perceptual functioning and measures of cognitive functioning.

Alcohol project. Comparison of alcohol, meprobamate, and methamphetamine as drugs influencing cognitive and perceptual functioning.

Studies in the psychopharmacology of nutmeg. These have been carried out in collaboration with Dr. John Krantz of the Department of Pharmacology.

STUDIES IN PSYCHOPHARMACOLOGY

These studies have been carried out by Drs. Klee, Silverstein, Jones, Finesinger, Callaway, and Mr. Alexander. They are part of a project supported by the U. S. Army Chemical Center.

Studies in the Reaction to Specific Chemical Agents. The major part of the work is done at the Army Chemical Center in cooperation with professional personnel at that installation. Studies are being made of the effects of certain pharmacologic agents upon normal human volunteers. The areas studied include group interaction and individual performance on psychomotor tasks and on psychological tests. During the course of the year, three papers were written and several talks were given at the Army Chemical Center by members of the group. The material dealt with is classified, and it is not possible to elaborate any further on the details of the work.

Antagonistic Effect of beuzyl substituted Anti-Serotonin (BAS) on Lysergic acid diethylamide 25 (LSD-25) in Humans. The study was designed to evaluate the possible relationship between the effect of LSD-25 and serotonin metabolism. The subjects were studied clinically and by means of psychological tests. The results indicate that BAS has no effect on the LSD-25 reaction.

THE ADJUSTMENT OF CHILDREN WITH POLIOMYELITIS

This is the fourth year of our study on the emotional, situational, personality and sociologic factors, and their role in the treatment, disability, and the recovery process in patients with poliomyelitis and their families. The members of the project are Drs. Robinson, Bierman, Silverstein, and Mr. Greenblum. This project is supported by the National Foundation for Infantile Paralysis. Drs. Finesinger and Bradley are the principal investigators.

The major effort in this project has been the study of a series of poliomyelitis patients and their families from the onset of the illness until twelve months after the date of discharge from the convalescent hospital. A second group of patients, initially seen during the summer season of 1955, were studied. In 1956-57, careful longitudinal and cross-section studies have been made in a large number of families and on children with paralytic poliomyelitis. This material is now being developed and a series of papers is in preparation for publication. Semi-annual progress reports have been submitted to the National Foundation for Infantile Paralysis since December, 1953.

In addition to these studies, the ancillary studies listed below have been conducted:

The representation of Physique in Children's Figure Drawings. A follow-up study of a previously published investigation, designed to test the validity of human figure drawings as projections of body image. (Robinson & Silverstein)

Attributes of Same-Sex and Opposite-Sex Characters in Thematic Perception. A test of certain assumptions employed in the interpretation of the thematic apperception test and related projective techniques. (Silverstein)

Publication Trends in Abnormal, Clinical, and Counseling Psychology: 1948-57. A study of shifting interests as reflected in the literature of the past ten years. (Silverstein)

A Psychoanalytic Study of the Novel Frankenstein. An attempt to relate elements in this story with the necrophilic interests of its author, Mary Shelley. (Bierman)

Social Mobility and Political Attitudes. The relation of types of mobility to attitudes and ideologies that have been considered relevant to the political process. (Greenblum)

STUDIES IN THE TEACHING AND LEARNING PROCESS IN MEDICAL STUDENTS

The department has been interested in studying the teaching and the learning process in medical students and in graduate physicians. Several papers have been read and published dealing with descriptions of class behavior, set learning, and the relation between teaching and psychotherapy. The current studies are part of a pilot project on the assessment of the undergraduate and graduate teaching of psychiatry at the School of Medicine, University of Maryland and the Psychiatric Institute of the University Hospital (Finesinger, Robinson, Pope, Davis, Silverstein, Howe). This is a pilot study supported by the National Institute of Mental Health.

Two major problems are being investigated. The first study is the teaching of interviewing to medical students and graduate physicians. Students are trained to carry out goal-directed interviews with patients. Skill in interviewing is measured and the changes in the student's performance are used to assess the methods of teaching.

The second study is concerned with the teaching and assessment of the student's clinical perception. We are using the Finesinger-Powdermaker series of sound films as a teaching and measuring instrument. By means of various measures, the student's performance is evaluated before and after specific instruction to determine change in acuity and breadth of perception (reading between the lines). These changes are related to the performance of the student, course performance, and other more effective criteria. Further correlation will be attempted between changes in perception and attitudes and attitude changes. This material is to be related to a study by Dr. Libo on the factors associated with the choice or rejection of psychiatry as one's medical specialty.

PSYCHOTHERAPY

Studies in individual and group psychotherapy have been carried on by Drs. Libo, Dunlap, Klee, and Glaser in an attempt to solve some of our clinical and in-patient problems. A partial list includes:

Studies in group therapy (Klee and Libo). A group of psychoneurotic patients have been seen weekly in psychotherapeutic sessions. Social and psychologic studies have been carried out in this group to determine what changes take place in learning the patient role and in group attraction and cohesiveness as therapy progresses.

Changes in parents who participate in group discussion (Dunlap). This study is being carried out with the Mental Hygiene Society. The major variable under study is the parents' awareness of interpersonal factors involved in children's problems. A reliable research instrument was developed and tried out on a small scale in one group of parents. Other instruments have been developed for an evaluation of mothers' attitudes by a study of responses to sentence completion blanks (Dunlap); and for a study of the effectiveness of group discussions with student nurses. (Dunlap and Glaser).

STUDIES IN PSYCHOLOGY

Drs. Pope and Libo have as their ongoing researches:

Continuation of work on the index of pathologic thinking (Pope). This index is a rating scheme based on a content analysis of deviant verbalizations in response to the Rorschach. Pursuant to the publication of initial findings, the manual is now being revised in preparation for further studies.

Development of an incomplete sentence test for clinical use (Pope, Libo, and Remy).

Development of a social psychologic theory defining the psychotherapeutic process and a methodologic framework with which the theory can be tested (Libo).

Development of a rating scale for describing patient behavior in individual psychotherapy (Libo, Joseph, Pope).

Table I

DEPARTMENT OF PSYCHIATRY

List of Projects Supported by Outside Agencies (1956-1957)

In Support of Research

1. U.S.P.H. Pilot and Evaluation
2. National Foundation for Infantile Paralysis
3. Army Chemical Center
4. U.S.P.H. Career Investigator
5. National Institutes of Health
6. Office of Naval Research
7. United States Air Force
8. National Research Council, Alcohol
9. Sadacca Fund

Total:	Annual Grants	\$202,861
	Overhead	\$ 26,312

U.S.P.H. Teaching Grants

1. U.S.P.H. Clinical Psychology
2. U.S.P.H. Undergraduate Grant
3. U.S.P.H. Graduate Grant
4. U.S.P.H. Graduate Traineeships

Total:	Annual Grants	\$ 96,742
	Overhead	\$ 5,675

In Support of Clinics

1. Maryland State Public Health Alcohol Clinic
2. Mental Hygiene Society Child Guidance Clinic

Total:	Annual Grants	\$ 21,700
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Lectureships

Etta and Myer Dana Fund

Total Support from Outside Agencies—1956-57

Annual Grants	\$320,203
Overhead	\$ 31,987

Total Support from Outside Agencies—1955-56

Annual Grants	\$248,110
Overhead	\$ 27,829

Total Support from Outside Agencies—1954-55

Annual Grants	\$281,668
Overhead	\$ 27,829

FRIDAY MORNING STAFF CONFERENCES—1956-1957

- October 5 "Collaborative Treatment of the Family Group in a Behavior Problem in Adolescence"
Jean M. Coyle, M.D., Fellow in Psychiatry; Joan H. Remy, Assistant in Medical Psychology; Charles Bagley, III, M.D.; Associate in Psychiatry, School of Medicine, University of Maryland, Baltimore, Maryland
- October 12 "Gender Role: The Evidence of Human Hermaphroditism"
John L. Hampson, M.D., Asst. Professor of Psychiatry, The Johns Hopkins Medical School, Baltimore, Maryland
- October 19 "Anthropology and Psychiatry"
Clyde K. Kluckhohn, Ph.D., Professor of Anthropology, Harvard University, Cambridge, Massachusetts
- October 26 "The Mental Hospital as a Total Institution"
Erving Goffman, Ph.D., Laboratory of Socio-Environmental Studies, National Institute of Mental Health, Bethesda, Maryland
- November 2 "Program and Projects of the Mental Hygiene Society Clinic for Children"
Marvin Jaffe, M.D., Assistant Professor of Psychiatry; and Staff, Mental Hygiene Society Clinic for Children, School of Medicine, University of Maryland, Baltimore, Maryland

- November 9 "The Nature of Messages in the Communication in Community Meetings"
Harry A. Wilmer, M.D., Naval Medical Research Institute, National Naval Medical Center, Bethesda, Maryland
- November 16 "Prenatal and Paranatal Factors in the Development of Childhood Behavior Disorders"
Benjamin Pasamanick, M.D., Professor of Psychiatry, Ohio State University, College of Medicine, Columbus, Ohio
- November 30 "The Cultural Origin of Neurotic Family Interaction"
John P. Spiegel, Research Associate, Laboratory of Social Relations, Harvard University, Cambridge, Massachusetts
- December 7 "On the Nature of Sexual Excitement"
Frank A. Beach, Ph.D., Sterling Professor of Psychology, Yale University, New Haven, Connecticut
- December 14 "Changes in Family Interaction with the Development of Mental Illness"
John A. Clausen, Ph.D., Chief, Laboratory of Socio-Environmental Studies, National Institute of Mental Health, Bethesda, Maryland
- December 21 "English Psychiatry Today"
Anthony Hordern, M.B., MRCPED., MRCP, DPM, Assistant in Psychiatry, School of Medicine, University of Maryland, Baltimore, Maryland
- January 4 "Limitations of Psychiatry"
Leo H. Bartemeier, M.D., Medical Director, Seton Institute, Baltimore, Maryland
- January 11 "The Focus of Attention, A Dimension of Personality that may be Modified Physiologically"
Enoch Callaway, M.D., Assistant Professor of Psychiatry, School of Medicine, University of Maryland, Baltimore, Maryland
- January 18 "Some Recent Development in the Study of Body Motion, Language and Psychiatry" (Illustrated by film)
Ray Lee Birdwhistell, Ph.D., Associate Professor of Anthropology, University of Buffalo, Buffalo, New York
- January 25 "Improving the Social Acceptance and Participation of Rejected Children: An Experimental Study of Four Therapeutic Strategies"
Ronald Lippitt, Ph.D., Professor of Psychology and Sociology, and Program Director, Research Center for Group Dynamics, University of Michigan, Ann Arbor, Michigan
- February 1 "An Experimental Approach to the Analysis of Emotional Behavior"
Joseph V. Brady, Ph.D., Chief, Department of Psychology, Walter Reed Army Institute of Research, Washington, D. C.
- February 8 "Some Problems of Body Image"
Douglas Noble, M.D., Consultant in Psychiatry, U. S. Naval Hospital, Bethesda, Maryland

- February 15 "The Mental Hospital as a type of Organization"
Talcott Parsons, Ph.D., Professor of Sociology, Harvard University,
Cambridge, Massachusetts
- March 8 "The Relationship of the Therapist to the Outcome of Therapy in
Schizophrenia"
Barbara J. Betz, M.D., Associate Professor of Psychiatry, The Johns
Hopkins University, Baltimore, Maryland
- March 15 "Preliminary Experiments on the Effects of Sleep Deprivation"
David McK. Rioch, M.D., Director of Neuropsychiatry Division,
Walter Reed Army Institute of Research, Washington, D. C.
- March 22 "Inferring the Strength of Certain Human Drives and Their Sympto-
matic Significance"
John Richard Wittenborn, Ph.D., University Professor of Psychology
and Education, Rutgers University, New Brunswick, New Jersey
- March 29 "Some Special Aspects of the Care of the Adolescent"
J. Roswell Gallagher, M.D., Chief of the Adolescent Unit, Children's
Hospital, Boston, Massachusetts
- April 12 "Some Recent Experimental Studies of Deficit Behavior in Schizo-
phrenia"
Norman Garmezy, Ph.D., Psychologist, Training and Standards
Branch, National Institute of Mental Health, Bethesda, Maryland
- April 26 "Some Observations on Schizophrenia"
Lewis B. Hill, M.D., Chief of Psychiatry, Sheppard and Enoch Pratt
Hospital, Towson, Maryland
- May 3 "Some Observations on Schizophrenia" (second in a series of three talks)
Lewis B. Hill, M.D., Chief of Psychiatry, Sheppard and Enoch Pratt
Hospital, Towson, Maryland
- May 10 "Studies in Human Cerebral Function: Prolonged Stress and the
Highest Integrative Functions of Man"
Harold G. Wolff, Professor of Medicine, Cornell University Medical
School, New York City, New York
- May 24 "Functions and Goals of a Comprehensive Medical Out-Patient Clinic"
W. Sidney Easterling, M.D., Associate in Psychiatry; and Panel,
School of Medicine, University of Maryland, Baltimore, Maryland
- May 31 "Some Observations on Hysteria" (last in a series of three talks)
Lewis B. Hill, M.D., Chief of Psychiatry, Sheppard and Enoch Pratt
Hospital, Towson, Maryland
- June 7 "The Optical Analysis of Nervous Tissue"
Leopold May, Ph.D., Instructor in Psychiatry, School of Medicine,
University of Maryland, Baltimore, Maryland
- June 14 "The Nature of Emotion"
Harley C. Shands, M.D., Associate Professor of Psychiatry, The
University of North Carolina, Chapel Hill, North Carolina
- June 21 Staff discussion of Friday morning conferences.

PUBLICATIONS 1956-1957

- BIERMAN, J. and MAY, E.: Necrophilia, Maryland Association of Private Practicing Psychiatrists Prize for Research, 1957. In Press.
- BIERMAN, J.; SILVERSTEIN, A. and FINESINGER, J. E.: A depression in a six year old boy with acute poliomyelitis, Submitted to the Psychoanalytic Study of the Child.
- CALLAWAY, E.: Editorial—On the production of hallucinated and psychosis-like states, *Ann. Int. Med.*, **42**: 721, 1954.
- CALLAWAY, E. and VAN BUSKIRK, C.: Observations on vibratory thresholds, *Confinia Neurological* **16**: 6, 301-308, 1956.
- CALLAWAY, E.: Institutional use of ataractic drugs *Modern Med.* **25**: 81 (Jan. 15) 1957.
- CALLAWAY, E. and FINESINGER, J. E.: Uncertainty as a measurement of psychopharmacology, *Jour. of Amer. Soc. for Clin. Invest.*, 1956.
- DAVIS, F.: Definitions of time and recovery in paralytic polio convalescence, *Amer. Jour. of Sociology*, **LXI**: 6, 1956.
- FINESINGER, J. E.: The era of research, *Proceedings of the Fourth Annual Psychiatric Institute*, N. J. Neuro-Psychiatric Institute, Princeton, N. J., 35-45, 1956.
- GLASER, K.; PATTERSON, P. R.; LIPTON, E. L. and UNNA, K. R.: Dosage of drugs in infants and children, III. Neostigmine, *Pediatrics*, **18**: 31, (July) 1956.
- GLASER, K. and EISENBERG, L.: Maternal deprivation, *Pediatrics*, **18**: 626. (October) 1956.
- GRENELL, R. G.: Mechanisms of actions of psychotherapeutic and related drugs, *Annals N. Y. Acad. Sci.*, **66**: 826-835, 1957.
- GRENELL, R. G.: Considerations regarding metabolic factors in the actions of chlorpromazine in Tranquilizing Drugs, Symposium Monograph published by AAAS (Public. No. 46) Washington, D. C., 1957.
- GRENELL, R. G.: Nucleic acids in selected brain areas, *Neurology*, 1957 (in press).
- GRENELL, R. G. and MAY, L.: Infra-red spectroscopy of nervous tissue, *Introductory studies*, J. Neurochem, 1957 (in press).
- GRENELL, R. G. and MAY, L.: Infra-red spectral studies of tissues, *Annals N. Y. Acad. Sci.*, 1957 (in press).
- GRENELL, R. G.: Molecular structure and functional activity of nerve cells, Monograph published by Amer. Inst. Biol. Sci., Ed. by R. G. Grenell and L. J. Mullins, 1957.
- GRENELL, R. G.; MAY, L. and FINESINGER, J. E.: Considerations concerning the mechanisms of actions of drugs on nerve cells. *Trans. Am. Neurol. Assoc.* 138, 1956.
- LIBO, L.: The Picture Impressions: A Projective Technique for Investigating the Patient-Therapist Relationship. (Manual; packet of pictures, Forms M & F; instructions; answer sheets.) Department of Psychiatry, School of Medicine, Univ. of Md., 1956.
- LIBO, L.: The projective expression of patient-therapist attraction, *Journal of Clinical Psychology*, **13**: 33-36, 1957.
- LIBO, L.: Authoritarianism and attitudes toward socialized medicine among senior medical students, *Social Psychol.*, 1957 (In Press).
- POPE, B. and JENSEN, A. R.: The Rorschach as an index of pathological thinking, *Jour. of Proj. Techniques*, 1957, **21**: 54-62.
- POPE, B.: Supervision in the training of clinical psychologists. Paper read at Springfield State Hospital Symposium. To be published in: Finn, J. & Brown, F. *Training in clinical psychology*. International Universities Press, 1957. (In Press).
- POPE, B.: Attitudes toward group therapy in a psychiatric clinic for alcoholics, *Quarterly Journal of Studies on Alcohol*, **17**: 233-254, 1956.
- REID, JOHN R.: The concept of unconscious anxiety and its use in psychotherapy, *Am. J. Psychoanalysis*, **16**: 42, 1956.
- ROBINSON, H. and FINESINGER, J. E.: A framework for the psychopathology of poliomyelitis, *The Nervous Child*, **II**: Number 2, 10-17, (January) 1956.
- ROBINSON, H. and FINESINGER, J. E.: The significance of work inhibition and work restriction for rehabilitation, *Journal of Social Work* (accepted for publication).

- ROBINSON, H.; FINESINGER, J. E. and BIERMAN, J.: Psychiatric considerations in the adjustment of patients with poliomyelitis, *New Eng.* **254**: Number 21, 975-981, (May) 1956.
- ROBINSON, H.: Review of Derner, F. Aspects of the psychology of the tuberculous, *Bulletin of the Medical Library Association*, 1954.
- ROBINSON, H.: Hospital adjustment problems of poliomyelitis patients, *Nursing World*, 10-15, (May) 1956.
- SILVERSTEIN, A. and ROBINSON, H.: The representation of orthopedic disability in children's figure drawings, *Journal of Consulting Psychology*, **20**: Number 5, 333-341, (October) 1956.
- TUERK, I.: Mothers Who Destroy Children. "A Program for the Treatment of Alcoholics in a State Hospital." In Press, RELEASE, Department of Mental Hygiene.
- WATERMAN, R.: A course for probation officers, *The National Probation and Parole Association Journal*, (April) 1957.
- YOUNG, I. S.: Some attitudes and responses of medical students, in *The Psychiatric Social Worker Teaches Medical Students*, The National Association of Social Workers, pp. 1-64, 1957.
- YOUNG, I. S.; LARGE, D.; MEUSER, M. and SELTZER, N. R.: Statement on teaching by a regional committee, pp. 14-20.
- YOUNG, I. S. and APTER, N. S.: Parataxic distortion and history taking: An experimental method in teaching junior medical students, *Am. J. of Psychiat.*, **113**: No. 3, (Sept.) 1956.

SPEECHES AND ADDRESSES

by members of the Institute Staff

July 1, 1956-June 30, 1957

- Mental Hygiene: Greek Orthodox Church of the Annunciation, Baltimore, Maryland, November, 1956. Dr. T. H. Atoynatan.
- History of Psychiatry: Greek Orthodox Church of the Annunciation, Baltimore Maryland, December, 1956. Dr. T. H. Atoynatan.
- Parent-Child, Teacher-Pupil Relationship and the Education of Primary School Children: St. Nicholas Greek Orthodox Church, Baltimore, Maryland, February, 1957. Dr. T. H. Atoynatan.
- On Alcoholism: Memorial Methodist Church, Catonsville, Maryland, April, 1957. Dr. T. H. Atoynatan.
- Graduation Address to Occupational Therapy Aides: Crownsville State Hospital, Crownsville, Maryland, November, 1956. Dr. Charles Bagley III.
- Mental Health Today: Unitarian Church, Baltimore, Maryland, February, 1957. Dr. Charles Bagley III.
- Mental Health Today: Eastern Star, Baltimore, Maryland, March, 1957. Dr. Charles Bagley III.
- The Role of the Psychiatric Institute in the Care of Emotionally Disturbed Children: Baltimore Chapter, National Association of Social Workers, Baltimore, Maryland, April, 1957. Dr. Charles Bagley III.
- Discussion of Mental Health Problems with Business and Professional Leaders in the Community: Moderator at five luncheon meetings at Merchants Club and Southern Hotel, Baltimore, Maryland, April, 1957. Dr. Charles Bagley III.
- Mental Health Program, WBAL Baltimore: Panel Member, Baltimore, Maryland, May, 1957. Dr. Charles Bagley III.
- Allergy (Panel discussion): Maryland Otolaryngological Society, Baltimore, Maryland, January, 1957. Dr. Klaus W. Berblinger.
- Discussant of Doctor Jerome Frank's paper at Esther Richards Memorial Meeting: Maryland Psychiatric Society, Baltimore, Maryland, April, 1957. Dr. Klaus W. Berblinger.
- Problems of Adolescence, Panel discussion with Judge Carter: Baltimore, Maryland, March, 1957. Dr. Klaus W. Berblinger.
- Brief radio address concerning Mayor D'Alesandro's "Guard Your Health Week": Baltimore, Maryland, March, 1957. Dr. Klaus W. Berblinger.

- Necrophilia: Maryland Assoc. of Private Practicing Psychiatrists, Baltimore, Maryland, 1957. Prize for research. Dr. Joseph Bierman and Miss Emily May.
- Applied Psychology: Course at College of Special and Continuation Studies, University of Maryland, September-February, 1956-1957. Miss Florence Burnett.
- Human Relations: Series of 15 seminars for student nurses at Lutheran Hospital, September-December, 1956. Miss Florence Burnett.
- Supervision in the Growth and Development of the Nurse: Workshop in Teaching and Implementation of Psychiatric-Mental Health Nursing, Catholic University of America, Washington, D. C., June, 1957. Miss Florence Burnett.
- A Practical Application of Information Theory in Psychopharmacology: Eastern Regional Conference of the American Psychiatric Association, Philadelphia, Pennsylvania, November, 1956. Dr. Enoch Callaway.
- Stress and Human Behavior: Association of Female Personnel Workers, Baltimore, Maryland, November, 1956. Dr. Enoch Callaway.
- Participant in Panel Discussion on the Normal Personality: V. A. Regional Conference, Baltimore, Maryland, May 21, 1957. Dr. Enoch Callaway.
- Certification and Licensure: Participant and representative, Maryland Psychological Association at Workshop, Baltimore, Maryland, Aug.-Sept., 1956. Dr. Ralph Dunlap.
- Problems of Certification and Licensure: Conference of State Psychological Associations, Chicago, Illinois, Sept., 1956. Dr. Ralph Dunlap.
- Psychiatrists for Mental Health Programs: Panel Discussant, Southern Regional Educational Board, Daytona Beach, Florida, August, 1956. Dr. J. E. Finesinger.
- The Era of Research in Psychiatry: 4th Annual Psychiatric Institute, New Jersey Neuropsychiatric Institute, Princeton, New Jersey, September, 1956. Dr. J. E. Finesinger.
- The Emotional Problems of the Cancer Patient: Maryland League for Nursing, Baltimore, Maryland, October, 1956. Dr. J. E. Finesinger.
- Keynote Speaker: Regional Conference, U. S. Veterans Administration Hospitals, on Psychiatry in the General Hospital, Waco, Texas, November, 1956. Dr. J. E. Finesinger.
- The Use of Hypnosis in Medical Practice: (Panel discussant), Conference of Mental Health, Representatives of State Medical Associations, Chicago, Illinois, Nov., 1956. Dr. J. E. Finesinger.
- The Teaching of Third and Fourth Year Psychiatry: Association of Southern Professors of Psychiatry, Washington, D. C., December, 1956. Dr. J. E. Finesinger.
- The Significance of Work Inhibition and Work Restriction for Rehabilitation: New England Council of Social Agencies, Boston, Massachusetts, Dec., 1956. Dr. J. E. Finesinger, (with Dr. H. A. Robinson).
- Keynote Speaker: Regional Conference, U. S. Veterans Administration Hospitals, on Psychiatry in the General Hospital, Dublin, Georgia, February, 1957. Dr. J. E. Finesinger.
- The Use of Placebos: Discussion of paper by L. Lisagna, Baltimore Psychiatric Society, Baltimore, Maryland, February, 1957. Dr. J. E. Finesinger.
- The Role of Social Service in a General Hospital: Women's Board, Johns Hopkins Hospital, Baltimore, Maryland, March, 1957. Dr. J. E. Finesinger.
- The Family and Mental Illness: Workshop, Chairman of Panel Discussion, Psychiatric Institute, Baltimore, Maryland, April, 1957. Dr. J. E. Finesinger.
- Stages in the Creative Process: Chairman, Panel Discussion, Psychiatric Institute, Baltimore, Maryland, April, 1957. Dr. J. E. Finesinger.
- The Patient Faces Cancer: Symposium sponsored by American Cancer Society and National League for Nursing, Chicago, May, 1957. Dr. J. E. Finesinger.
- The Integrated Role of the Psychiatrist and Social Worker: Panel discussant, Annual meeting, The American Psychiatric Association, Chicago, Illinois, May, 1957. Dr. J. E. Finesinger.
- The Psychiatric Social Worker in Medical Education: Chairman, Luncheon Meeting, Social Service Committee, The American Psychiatric Association and American Association of Social Workers, Chicago, Illinois, May, 1957. Dr. J. E. Finesinger.

- Treatment of Psychosomatic Disorders: Meeting on therapy sponsored by Carrier Clinic, Princeton, New Jersey, June, 1957. Dr. J. E. Finesinger.
- The Teaching of First Year Psychiatry: University of Maryland Medical Alumni Association, Baltimore, Maryland, June, 1957. Dr. J. E. Finesinger.
- The Pre-School Child and Delinquency: Panel Member, Workshop of Second Governor's Conference on Juvenile Delinquency, College Park, Maryland, Sept., 1956. Dr. Kurt Glaser.
- Behavior Characteristics of the Pre-School Child: P.T.A. of Kinderkraft Kindergarten, Baltimore, Maryland, Sept., 1956. Dr. Kurt Glaser.
- The Emotionally Healthy Child and How to Keep Him So: Child Study Association of Baltimore, October, 1956. Dr. Kurt Glaser.
- The Adjustment of Handicapped Children: Anne Arundel County Health Department, Association of Handicapped Children, Annapolis, November, 1956. Dr. Kurt Glaser.
- How to be More Effective Parents: Women's Club of Johns Hopkins University, Baltimore, Maryland, November, 1956. Dr. Kurt Glaser.
- Juvenile Delinquency: Evening meeting for pediatricians, Auspices of Mental Hygiene Society Clinic for Children, Psychiatric Institute, Baltimore, Maryland, November, 1956. Dr. Kurt Glaser.
- The Negativistic Phase: Children's Guild, Inc., Parent Discussion, Baltimore, Maryland, January, 1957. Dr. Kurt Glaser.
- What Children can Benefit most from Attending the Children's Guild?: Meeting of Directors of Nursery Schools of Baltimore at Children's Guild, Baltimore, Maryland, January, 1957. Dr. Kurt Glaser.
- School Phobia: Evening meeting for pediatricians, auspices of Mental Hygiene Society Clinic for Children, Psychiatric Institute, Baltimore, Maryland, January, 1957. Dr. Kurt Glaser.
- Jealousy: Children's Guild, Inc., Parent Discussion, Baltimore, Maryland, February, 1957. Dr. Kurt Glaser.
- What is the Nature of the Trainable Child?: Participant in Symposium, Maryland Society for Mentally Retarded Children, Inc., Workshop, Baltimore, Maryland, February, 1957. Dr. Kurt Glaser.
- Pre-school Problems: Chairman, panel discussion, Children's Guild, Inc., Baltimore, Maryland, February, 1957. Dr. Kurt Glaser.
- Spoiling: Children's Guild, Inc., Parent Discussion, Baltimore, Maryland, March, 1957. Dr. Kurt Glaser.
- Adolescence: Evening meetings for pediatricians, auspices of Mental Hygiene Society, Clinic for Children, Psychiatric Institute, Baltimore, Maryland, March, 1957. Dr. Kurt Glaser.
- Children's Anxieties: Parent Education Capsule Course, P.T.A. of Public School, Fallstaff Auditorium, Baltimore, Maryland, March-April, 1957. Dr. Kurt Glaser.
- Mental Health and Prejudice: B'nai B'rith Women's Lodge, Baltimore, Maryland, April, 1957. Dr. Kurt Glaser.
- Spontaneous Discussions: Children's Guild, Inc., Parent Discussion, Baltimore, Maryland, April, 1957. Dr. Kurt Glaser.
- The Father's Role in the Family: Northwest Cooperative Preschool Group, Baltimore, Maryland, April, 1957. Dr. Kurt Glaser.
- When a Teacher has a Problem Child: State Teachers' College, Towson, April, 1957. Dr. Kurt Glaser.
- Discussion on Anxieties in Teachers about Meeting Parents; Problems of School Phobia: Principals, Parent Education Advisory Committee of Baltimore City Department of Education, Baltimore, Maryland, May, 1957. Dr. Kurt Glaser.
- Sex Education of Children of Elementary School Age: P.T.A. of Public School 218, Baltimore, Maryland, May, 1957. Dr. Kurt Glaser.
- Parent's Reactions to Children's Guild: Children's Guild, Inc., Parent Discussion, Baltimore, Maryland, June, 1957. Dr. Kurt Glaser.
- Nucleic Acid Analysis of Areas of the Brain: American Academy of Neurology, Brussels, Belgium, April, 1957. Dr. Robert Grenell.

- The Effects of Insulin on Cortical Activity: International Physiological Congress, University of Aarhus, Denmark, August, 1956. Dr. Robert Grenell.
- Member of Panel on Problems of Alcohol: Springfield State Hospital, Sykesville, Maryland, June, 1957. Dr. Robert Grenell.
- Problems of Adolescence: Panel Member, P.T.A. Baltimore Hebrew Congregation, Baltimore, Maryland, October, 1956. Dr. Marvin Jaffe.
- Child Psychiatry: Tifereth Israel Brotherhood Breakfast, Baltimore, Maryland, December, 1956. Dr. Marvin Jaffe.
- Child Psychiatry: Eutaw Place Temple P.T.A., Baltimore, Maryland, January, 1957. Dr. Marvin Jaffe.
- Discussant of talk of Dr. Reginald Lourie: Pediatric Section, Medical Chirurgical Faculty, Baltimore, Maryland, January, 1957. Dr. Marvin Jaffe.
- Three Papers Presented to Groups Visiting Army Chemical Center: Material deals with work done under Army Chemical Corps Contract, DA-18-108-CML-5519, Edgewood, Maryland. Dr. Gerald Klee.
- Orientation in Psychiatry: High School Students, Bel Air High School, February, 1957. Dr. Gerald Klee.
- Orientation in Psychiatry: Several groups of high school students, college students, and group of school teachers. Psychiatric Institute, Baltimore, Maryland, June, 1957. Dr. Gerald Klee.
- Community Mental Health: Participant in Seminar, Johns Hopkins University School of Public Health, Baltimore, Maryland, 1956-57. Dr. Lester M. Libo.
- Guest Lecturer: Spring Grove State Hospital, Catonsville, Maryland, May, 1957. Dr. Lester M. Libo.
- Management of Psychosomatic Hall: Kecoughatan Veterans Hospital, Newport News, Virginia, February, 1957. Dr. E. T. Lisansky.
- Comprehensive Evaluation of Medical Problems: Wilmington Veterans Hospital Facility, Wilmington, Delaware, April, 1957. Dr. E. T. Lisansky.
- Medical, Psychiatric and Psychological Teamwork in the Evaluation of Medical Problems: Fort Howard Veterans Hospital, Baltimore, Maryland. Dr. E. T. Lisansky.
- Psychosomatic Evaluation and Management of Medical Problems: North Virginia Clinical Assembly, Alexandria, Virginia. Dr. E. T. Lisansky.
- Anorexia Nervosa: Case Reports with Differential Diagnosis and Management, Medical Research Club of Baltimore, Baltimore, Maryland. Dr. E. T. Lisansky.
- Comprehensive Medicine: York County Medical Society, York, Pennsylvania, May, 1957. Dr. E. T. Lisansky.
- Infrared Spectral Studies of Tissues: New York Academy of Science, December, 1956. Dr. Leopold May.
- Infrared Tissue Studies: Baltimore-Washington Spectroscopy Society, Washington, D. C., February, 1957. Dr. Leopold May.
- The Rorschach Test As An Index of Pathological Thinking: American Psychological Association, Chicago, Illinois, September, 1956. Dr. Benjamin Pope (with Dr. R. Jensen).
- Index of Pathological Thinking: Baltimore Clinical Psychology Association, Baltimore, Maryland, November, 1956. Dr. Benjamin Pope.
- Comprehensive Medical Care of Patients: Fort Howard Veterans Hospital, Baltimore, Maryland, December, 1956. Dr. Benjamin Pope (with Dr. E. Lisansky).
- The Psychologist in Comprehensive Medicine: Alexandria Medical Society, Alexandria, Va., April, 1957. Dr. Benjamin Pope.
- Supervision in the Training of Clinical Psychologists: Springfield State Hospital Sykesville, Maryland, May, 1957. Dr. Benjamin Pope.
- Freud And Our Discontents: A.A.A.S. And American Philosophical Association, New York, December, 1956. Dr. John R. Reid.
- Psychoanalysis, Logic and Philosophy: Academy of Psychoanalysis, Chicago, Illinois, May, 1957. Dr. John R. Reid.

- Psychiatric Nosology. Problem of Logical Analysis: American Psychiatric Association, Chicago, May, 1957. Dr. John R. Reid.
- Social Class and Psychiatry: Baltimore Society of Private Practitioners, Baltimore, Maryland, August, 1956. Dr. H. A. Robinson.
- Problem and Stratagems in Interdisciplinary Research: Rutgers Univ. Colloquium, New Brunswick, N. J., Sept., 1956. Dr. H. A. Robinson.
- Social Stratification and the Practice of Psychiatry: Phipps Clinic, Johns Hopkins Hospital, October, 1956. Dr. H. A. Robinson.
- The Atypical Child: Rutgers University, Seminar, New Brunswick, New Jersey, February, 1957. Dr. H. A. Robinson.
- Mental Hygiene: Wellwood Parent Teachers Association, 1957. Dr. Nathan Schnaper.
- Program on Pain: (TV-MD) under auspices of Postgraduate Committee, School of Medicine, University of Maryland, 1957. Dr. Nathan Schnaper.
- Parents Are People Too: Cockeysville Adult Education Group of Homemakers, February, 1957. Miss Bonnie Strain.
- Film on Mental Health: Discussion Leader, Towson Women's Club, November, 1956. Miss Bonnie Strain.
- Psychiatric Social Work in Child Guidance Clinics: Senior Psychology class, Goucher College, November, 1956. Miss Bonnie Strain.
- Mothers Who Destroy Children: Medical Research Club, Baltimore, Maryland, January, 1957. Dr. Isadore Tuerk.
- A Program For The Treatment of Alcoholic Patients in a State Hospital: Department of Mental Hygiene, State of Massachusetts, May, 1957. Dr. Isadore Tuerk.
- Psychotherapeutics As Applied to Schizophrenic Patients: Seminar, Post-Doctoral Training Institute, Division of Clinical Psychology of the American Psychological Association, Northwestern University, Evanston, Illinois, August, 1956. Dr. Otto A. Will.
- Psychotherapy and the Schizophrenic Patient: Galesburg State Research Hospital, Galesburg, Illinois, August, 1956. Dr. Otto A. Will.
- Psychotherapy as Evolved from Observations of the Schizophrenic Reaction: Neuropsychiatric Society of Virginia and District Branch of American Psychiatric Association, Roanoke, Virginia, October, 1956. Dr. Otto A. Will.
- The Onset of Schizophrenia with Implications for Psychotherapy: Edward T. Gibson Lecture, University of Kansas School of Medicine, October, 1956. Dr. Otto A. Will.
- Psychotherapy of the Psychoses: Connecticut Postgraduate Seminar in Psychiatry and Neurology, Middletown, Connecticut, January, 1957. Dr. Otto A. Will.
- The Nature of Schizophrenia: University of Virginia Medical School, Charlottesville, Virginia, January, 1957. Dr. Otto A. Will.
- The Therapy of Schizophrenia: University of Virginia Medical School, Charlottesville, Virginia, January, 1957. Dr. Otto A. Will.
- The Problem of Schizophrenia: 3 lectures at St. Elizabeths Hospital, Washington, D. C., Spring, 1957. Dr. Otto A. Will.
- Psychotherapy and the Hospitalized Patient: 6 lectures at the Spring Grove State Hospital, Catonsville, Maryland, Spring, 1957. Dr. Otto A. Will.
- Discussion of paper, "The Psychotherapy of Schizophrenia": By W. Abse, May, 1957. Dr. Otto A. Will.
- Discussion of paper, "Problems in Initiating Psychoanalytic Psychotherapy of a Schizophrenic Following Hospitalization": by A. D'Amore, May, 1957. Dr. Otto A. Will.
- Discussion of paper, "Family Participations in Schizophrenia": Murray Bowen and Warren Brody, Annual Meeting, American Psychiatric Association, May, 1957. Dr. Otto A. Will.
- Psychotherapy and the Schizophrenic Reaction: Veterans Administration Mental Hygiene Clinic, Philadelphia, Pennsylvania, June, 1957. Dr. Otto A. Will.
- The Schizophrenic Reaction: U. S. Naval Medical School, Bethesda, Md., June, 1957. Dr. Otto A. Will.

- Interpretation of a Mental Hygiene Society Clinic Function: Episcopal Women's Group, Baltimore, Maryland, December, 1956. Miss Margaret Wilson.
- The Emotionally Healthy Child: Methodist Women's Group, Baltimore, Maryland, February, 1957. Miss Margaret Wilson.
- Interpretation of Mental Hygiene Society Clinic Function: C.I.O. Executive Board, Baltimore, Maryland, March, 1957. Miss Margaret Wilson.
- Interpretation of Mental Hygiene Society Clinic Function: Mental Hygiene Society of Greater Baltimore Volunteers, Baltimore, Maryland, May, 1957. Miss Margaret Wilson.
- The Emotionally Healthy Pre-School Child: May, 1957. Miss Margaret Wilson.
- The Mental Hygiene Society Program: Televised Program with Dr. K. Glaser and Dr. R. Dunlap, Baltimore, Maryland, June, 1957. Miss Margaret Wilson.
- The Integrated Role of the Psychiatrist and Social Worker: Panel Discussant, Annual Meeting of the American Psychiatric Association, Chicago, Illinois, May, 1957. Mrs. Imogene S. Young.
- Chairman and discussion leader of meeting on "Supervision in the Psychiatric Setting": National Conference of Social Welfare, Philadelphia, Pa., May, 1957. Mrs. Imogene S. Young.
- Discussant, "Psychiatric Social Workers in Medical Education": Luncheon meeting, Social Service Committee of the American Psychiatric Association, and the American Association of Social Workers, Chicago, Illinois, 1957. Mrs. Imogene S. Young.
- Chairman, Workshop on "The Family and Mental Illness": Psychiatric Institute, Baltimore, Maryland, April, 1957. Mrs. Imogene S. Young.



DEPARTMENT OF RADIOLOGY

Organization and Ideology

The Department of Radiology is organized into two divisions: (1) the Division of Diagnosis and (2) the Division of Radiation Therapy. The Department of Radiology has always been primarily a service organization but during the past four years more emphasis has been placed on teaching and research which are now considered major responsibilities of this Department.

Faculty and Staff

John M. Dennis, M.D.	Professor and Head
Charles N. Davidson, M.D.	Professor of Clinical Radiology (P.T.)
Fernando G. Bloedorn, M.D.	Associate Professor of Radiology and Head, Division of Radiation Therapy
Robert P. Boudreau, M.D.	Assistant Professor (on leave of absence for advanced study of Neuroradiology— England and Sweden)
Carlo A. Cuccia, M.D.	Assistant Professor
Lloyd M. Bates.	Radiation Physicist—Assistant Professor
James A. Lyon, M.D.	Associate
Herbert L. Warres, M.D.	Instructor (P.T.)
Nathan B. Hyman, M.D.	Instructor (P.T.)
Raul Mercado, M.D.	Instructor (effective 7-1-57)

Teaching

During the past four years there has been increased emphasis on teaching, particularly at the undergraduate medical student level. During this time a short course (12 hours) in roentgen anatomy has been included in the first year gross anatomy course and it is planned to further expand this course by the addition of functional anatomy as demonstrated by cine-radiography. A lecture demonstration course, formerly given during the fourth year, has been shifted to the third year and replaced by a clinical clerkship in the fourth year.

Research

As with teaching, greater emphasis has been placed on research during the past two years. Prior to organization of the Division of Radiation Therapy, research in the Department was entirely of a clinical nature; and while it is still mainly on a clinical level, some basic research, particularly on radiation dosage and distribution, is being performed.

The following research problems are being investigated in this Department. Sources and amount of financial support for several of these research projects are indicated.

1. Radiation Therapy in the Treatment of Urinary Bladder Cancer.
 - a. Investigation and Evaluation of Established Radiation Methods.
 - b. Development of New Radiation Methods.

Supported by an \$11,988 grant from the National Institute of Health, with an additional \$7,000 per year for the next two years.

2. Radium Implants: Development of a System of Distribution, Dosage Calculations and Rules of Application for Combinations of Geometrical Patterns of Radium Implants Applied in the Treatment of Advanced, but Still Curable Malignancy.
Supported by a \$10,000 grant from the American Cancer Society.
3. The treatment of Multiple Papillomata of the Bladder by Radioactive Colloidal Isotopes.
Supported by a \$4,070 grant from the American Cancer Society, Maryland Division.
4. Effects of Preoperative Irradiation in the Treatment of Carcinoma of the Breast.
5. Preoperative Radical Irradiation (Cobalt-60) Plus Radical Surgery in the Treatment of Carcinoma of the Esophagus.
6. Combined Approach of Preoperative Irradiation and Surgery in the Treatment of Bronchogenic Carcinoma.
7. Combined Therapy (Cobalt-60) Plus Radical Surgery in the Treatment of Advanced Carcinoma of the Head and Neck.
8. Significance of Subdural Air in Pneumoencephalography in Infants.
9. Supervoltage Radiography in
 - a. Pneumoencephalography.
 - b. Chest lesions.
10. Clinical Evaluation of Nephrotomography as a Diagnostic Procedure.

Graduate Program

With the organization of the Division of Radiation Therapy during the past two years, the residency training program has been expanded to include seven residents, and an expansion to nine residents is contemplated for next year. The residency program includes two years of radiologic diagnosis with six months in pathology, and one year of radiation therapy, including radium and other radioactive isotope training.

Dr. Donald A. Wolfel has received a six months' fellowship at the Radiologic Registry of the Armed Forces Institute of Pathology, effective July 1, 1957.

Statistics

Diagnostic Division

Number of patients.....	41,703
Number of roentgen examinations.....	55,146

Therapy Division

Number of treatments.....	7,150 patient days
Number of radium and radon implantations.....	179
Number of patients with intracavitary radio-active instillations.....	15

Facilities and Equipment

The Department of Radiology has two separate physical facilities. The main department is located in the Hospital and is equipped for all types of routine and special diagnostic studies as well as radiation therapy. A smaller division, located in the Out-Patient Department, is equipped only for routine diagnostic studies. Special diagnostic studies and radiation therapy for clinic patients are performed in the main department in the Hospital on an appointment basis.

At the present time the facilities of the Department are grossly inadequate, particularly in the Diagnostic Division. Recently, however, a \$301,000 construction bid was let for enlargement of the diagnostic area which will be completely air-conditioned and equipped with the new and the most modern equipment available, costing another \$200,000. Included in the new equipment are: (1) a Schonander biplane angiographic

unit capable of making eight exposures per second in each of two planes, (2) a body section unit capable of making body sections in both the upright and supine positions, (3) a cineradiographic unit for making motion pictures of the fluoroscopic image, (4) a new automatic processing unit, completely processing a film in six minutes, and (5) four new fluoroscopic-radiographic units complete with ceiling-mounted tube stands and automatic spot film devices.

During the past year the Radiation Therapy Division has been expanded both in space and equipment. The Martha V. Filbert Radiation Therapy Center was established by the Filbert Foundation as a memoriam to Mrs. Martha V. Filbert. Contributions from the Women's Auxiliary of the University Hospital and the National Brewing Company assisted in the establishment of this therapy center, which was constructed in the basement of the Psychiatric Institute. A radioactive cobalt therapy unit with a 650 curie radioactive source was installed. A new contact therapy unit (for Chaoul therapy) has been purchased and will soon be installed. The Therapy Division has also recently developed a localizing device for localizing tumors and portal directions.

Community Service

The Department of Radiology renders many community services in both its Diagnostic and Therapy Divisions. The diagnostic unit in the Out-Patient Department renders a large amount of free service to the indigent and low-salaried patients who seek medical care in this area. The Diagnostic Division in the main hospital provides similar diagnostic studies for these patients and others after they have been hospitalized as well as to the private in-patients.

The Division of Radiation Therapy renders the best medical care available in this State to all patients suffering from malignancies. The radioactive cobalt teletherapy unit is the only supervoltage irradiator available in this area for treatment of the general public. Since its installation, the number of patients receiving daily treatment has increased approximately 150 per cent, and this number is continuously increasing.

Publications—1956

- BLOEDORN, F. G.: Application of the Paterson-Parker system in interstitial radium therapy, *American Journal of Roentgenology, Radium Therapy and Nuclear Medicine*, March, 1956.
- CROSBY, R. M. N. and DENNIS, J. M.: Subdural collections of fluid in infants and children, I. Visualization of the capsule with thorium dioxide, *American Journal of Roentgenology, Radium Therapy and Nuclear Medicine*, September, 1956.
- DENNIS, J. M.: Association of irradiation with neoplasia in children and adolescents, Editorial, *Annals of Internal Medicine*, March, 1956.
- DENNIS, J. M.: Intravenous cholecystography and cholangiography, *Maryland State Medical Journal*, March, 1956.
- DENNIS, J. M. and BOUDREAU, R. P.: Pleuropulmonary tularemia: Its roentgen manifestations, *Radiology*, January, 1957.
- DENNIS, J. M. and MERCADO, R.: Scurvy following folic acid antagonist therapy, *Radiology*, September, 1956.
- DENNIS, J. M.; WORKMAN, J. B. and BAUER, R. E.: Radioactive colloidal gold in the control of malignant effusions, Report and analysis of 60 patients, *American Journal of Roentgenology, Radium Therapy and Nuclear Medicine*, June, 1956.

Papers Presented—1956

1. The Significance of Subdural Air in Pneumoencephalography in Infants—Robert P. Boudreau, M.D. Presented at Eastern Conference of Radiologists, Baltimore, Maryland, March, 1956, and at Eighth International Congress of Radiology, Mexico City, July, 1956.
2. Treatment of Advanced Squamous Cell Carcinoma of the Head and Neck by Interstitial Radium Implantations—Fernando G. Bloedorn, M.D. Presented at the Eastern Conference of Radiologists, Baltimore, Maryland, March, 1956, and at Eighth International Congress of Radiology, Mexico City, July, 1956.
3. Dionosil in Bronchography—Henry H. Startzman, M.D. Presented at Eastern Conference of Radiologists, Baltimore, Maryland, March, 1956.
4. Pleuropulmonary Tularemia: Its Roentgen Manifestations—John M. Dennis, M.D. Presented at Eastern Conference of Radiologists, Baltimore, Maryland, March, 1956.
5. Diagnostic Problems of the Urinary Tract—John M. Dennis, M.D. Presented as a refresher course at the annual meeting of the American Roentgen-Ray Society, Los Angeles, California, September, 1956.

Recommendations for Improvement

The contract has been let and equipment purchased for the new addition to the Diagnostic Division in the University Hospital. The facilities in the Division of Radiation Therapy and in the diagnostic unit in the Out-Patient Department are far inadequate for handling the present patient-load. Plans have been submitted for expansion of each of these areas and it is hoped that this expansion will occur with the building of a new Out-Patient Department.

In the new Out-Patient Department, plans for the expansion of the Division of Radiation Therapy will include such things as office space, a workshop, research laboratories, greater area for patient-care and super- and megavoltage irradiation equipment for handling any and all types of malignancy.

DEPARTMENT OF SURGERY

The Department of Surgery is one of the major divisions within the framework of the School of Medicine. In general, it is directed to the fulfillment of the same functions as any of the clinical departments within the School. It is composed of six divisions, General Surgery, Orthopedic Surgery, Urologic Surgery, Neurologic Surgery, Thoracic Surgery and Otolaryngology.

A sincere attempt is made by the physicians of these divisions to undertake the best service and most critical care of patients who seek from them diagnosis and surgical treatment of their disease. This is the role of every surgeon. Beyond this is the desire to teach students and young house officers a basic approach to the scientific study of disease and its surgical correction. In the course of this experience it is anticipated that a few chosen men will be encouraged to cultivate an attitude of critical inquiry, both basic and clinical, that may contribute to the further knowledge of disease and the best manner and method of its cure.

The full recognition of these ideals has brought about a fundamental change in the heretofore basic philosophy of this department. Whereas, its clinicians and teachers have all, in the past, devoted their time on a part-time basis, the majority of division heads are now directing themselves toward the practice of their specialty and their teaching and research inclinations on a full-time basis. Encouragement and support of this attitude by the Medical School has been most gratifying.

During the twelve months preceding this report, the Department of Surgery has continued the process of change and reorganization begun two years ago. Much of this change has been silent and unnoticed for it lies within the thoughtful planning of the several members and Division Chiefs of the department and has as yet been impossible of achievement. A share of the disappointment and disillusionment has come from the inability to enlarge the clinical facilities of the several divisions to a point where patient load and turnover is great enough to support properly the training and teaching programs required of them. This is perhaps the most urgent problem before us in the coming year. Others include enlargement and improvement in operation room service and techniques, improvement in accident room service and facilities, increase in professional and non-professional personnel and increase in non-patient area for departmental allocation and use.

Notwithstanding these deficits the department as a whole has made a concerted effort to enlarge its service to the people of Maryland, to improve and better its teaching contacts with the students of the medical school and to enhance and improve its teaching capacity to the young men and women seeking post-graduate experience under its guidance.

General Surgery

This is the largest division within the department. It carries the largest case load both within the hospital and in the out-patient unit. Its responsibilities are basically to care for the large number of patients whose illnesses do not lie within the provinces set forth rather specifically by the other divisions, and, most importantly, to train and

teach students, nurses and house officers the more basic and fundamental aspects of disease, the diagnosis of disease and injury, the manners and methods of care of sick patients. In the accomplishment of these goals it is responsible to a large extent for the adequate preparation of intern and residents for entrance into the other fields of surgical interest. These duties are fulfilled by two full-time staff members and a large number of part-time surgeons who give freely but in varying ways and to variable degrees of their knowledge, time, interest and loyalty—their recompense is for the most part calculated in terms of good and thoughtful care of their patients and mature assistance when this is required.

The teaching, training and research programs envisioned by this division is a broad one which encompasses considerable knowledge and ability, for it encroaches to a varying degree upon the fields of internal medicine, pediatrics, gynecology, radiology and radiation therapy, and several others. Not the least of its ideals is to teach and become proficient in the thoughtful, kindly, wise and patient care of sick people.

Sporadic discussions have taken place on several occasions among members of the General Surgery Staff concerning some increase in patient load for the further and more thorough training of house officers. One direction these discussions have taken has been the assignment of two more senior men in training in the division to the Maryland State Prison in Baltimore. This institution has a recently constructed 75 bed hospital section, a well equipped operation room, roentgenologic unit, laboratories, and similar divisions. It is anticipated and hoped that this will become a focal area for surgical care of all patients from like institutions in the State of Maryland. The surgical care of these patients and the teaching of house officers and students in this area is under the supervision of Dr. Edwin H. Stewart, Jr., Associate in Surgery.

One of the early steps taken to increase student and house officer contact with members of the General Surgery Staff was to increase the full-time members of the Staff. In September 1956 we were joined by Dr. Arlie Mansberger who has already become a splendid and most valuable associate. Dr. Mansberger is a graduate of the School of Medicine, University of Maryland. He finished his residency in Surgery at the University Hospital in 1954 and returned to us after the completion of a most valuable two years as Chief of the Medical Studies Group, Biophysics Division, C. W. Laboratories, Army Chemical Center, Maryland.

Because of the growing need for more physicians trained in the diagnosis and surgical treatment of cancer, the National Cancer Institute, under the National Cancer Act, provides training grants for special training of physicians in suitable training centers. The University of Maryland has been designated one of these centers. Dr. Benjamin A. Addison, Resident in Surgery, was the recipient of this traineeship for the year 1956-57.

In October, 1956 Dr. John R. Hankins returned to the department as an Assistant Instructor assigned to the Research Laboratory. Dr. Hankins returned to this country after his tour of duty with the Armed Services assigned to the Near East. He remained with us until May, 1957 when he returned to the Shiraz Medical Center as Chief of Surgery in the Nemazee Hospital, Shiraz, Iran.

It is sometimes said that a teaching program at the graduate level, which does not change, but remains static year after year, is likely a barren one. During the past school year two new, but not original, innovations were made:

- (a) A small group of senior students were sent to South Baltimore General Hospital for one-half their surgical section period. The response and reaction of the majority of senior students who were thus assigned was adverse to this assignment and it seems proper to consider abandonment of this service.
- (b) The senior students assigned to the University Hospital services were privileged to assume the duties of an extern, alternating daily these duties with others of their immediate group. On the whole the students' response was reasonable, mature and worthwhile. It is hoped that this aspect of their surgical experience can be repeated again next year.
- (c) The junior student teaching program did not vary greatly from that of the previous year in its source of patient contact or in its variety of opportunities to learn for the student. On the other hand, greater effort was made by the members of this staff to enhance their individual student contacts and to improve their teaching technique. This effort has borne some fruit in terms of the student's response and particularly in his increased appreciation and demonstration of acquired knowledge of surgery and the surgical specialties.
- (d) During the school year the Audio-Visual committee of the Department of Surgery prepared a weekly motion picture for presentation to the junior and senior students and the house staff for teaching and discussion of surgical diagnosis and treatment of various diseases.

The teaching, training and research activities of this division have been served admirably through the availability of donations and collections allocated to various funds for the use within the department. The funds received during the past year are listed:

- (1) Mrs. Catherine C. Fuller, Washington, D. C.
\$250.00—Surgical Research Fund
- (2) Dr. Jacob J. Greengrass
\$1,000.00—Surgical Research Equipment Fund
- (3) Pangborn Foundation Fund, Hagerstown, Md.
\$18,000.00—Surgical Research Fellowship
- (4) Residents' Surgical Fund
\$24,000.00 (Approximately)

Were it not for these funds many of the small advances made in the past year could not have been possible. Funds accumulated in the Residents' Surgical Fund have been the largest source of income available and are collected from patient pre-paid insurance services. Some 37 per cent of this year's accumulation in this fund has been devoted to the support of house officers and student Fellows within the department. An approximate 42 per cent has furnished, equipped and supplied the Surgical Research Laboratory. Ten per cent of the fund has been applied to travel expenses for staff and house officers who have attended many of the major medical meetings over the country and to the supply of current surgical literature for the further education of housemen.

It seems apparent that many of the needs and activities of the department and its various divisions would have been greatly limited without this income source.

The out-patient area has been subjected to considerable physical change within the past year. There has been a relocation of the space for minor operation procedures. This has afforded an improved staff supervision and has facilitated a closer-knit teaching unit. In addition to the part-time teaching staff assigned to this area, two to three house officers, a resident and one or two assistant residents, participate in the patient care and teaching responsibilities. The out-patient service has been under the supervision of Dr. Edwin H. Stewart, Associate in the Department of Surgery.

The General Surgery Division has made minimal progress in the Research Laboratory area. Much time and effort have been spent in developing the physical facilities in the Bressler Research Laboratory assigned to the division. The overall supervision of the Laboratory has been the responsibility of Dr. Bruce Armstrong. With the recent completion of these facilities, work progress has begun already on several projects relating to trauma, hemorrhagic shock and wound healing. During the coming year an extensive, nation-wide survey is to begin on the effects of chemotherapeutic agents upon cancers of the breast, stomach and colon. This division of surgery has been chosen as one of the participants in this evaluation program.

Following is a listing of the various research projects now under way in this division:

- (1) The effect of hemorrhagic shock upon the intracellular respiratory system (Dr. Buxton)
- (2) Humoral factors injurious to the capillary vascular system in traumatic and hemorrhagic shock (Dr. Greisman)
- (3) Surgery alone vs. surgery plus chemotherapy in:
 - (a) Gastric cancer
 - (b) Cancer of colon and rectum
 - (c) Cancer of breast } Drs. Buxton and Mansberger
- (4) Conduction of nerve impulse in myelinated fibers (Dr. Esmond) (Awaiting grant request)
- (5) F.S.H. determinations as an index for treatment in advanced breast cancer (Dr. Hull)
- (6) The relationship of adenosine-5-monophosphate to wound healing (Dr. Reynolds* and Dr. Codington*)
- (7) Differential gastric excretion of porphyrin by patients with gastric ulcer and carcinoma (Dr. Addison,* cancer trainee, under the direction of Drs. Figge and Mack)
- (8) A follow-up study of patients after simple closure of perforated peptic ulcer (Dr. Musavi*)
- (9) Recurrence rates after the various operations for correction of inguinal herniae (Dr. Scott*)

* House Officer

GENERAL SURGERY

Residents

Addison, Benjamin A.
de Venecia, Nestor
Williamson, Robert

Assistant Residents (3 yr.)

Brady, Charles W.
Codington, John B.
Musavi, Sahredin
Reeves, Henry G.
Scott, Roger

Assistant Residents (2 yr.)

Douros, Photios
Foley, Michael
Reynolds, Beverly

Assistant Residents (1 yr.)

Bass, Haskell
Cox, Everard
Gomez, Andres
Himmler, Walter
Hojnoski, Wacław

LECTURES

Dr. Robert W. Buxton

1. "Megacolon"
Church Home and Hospital, Baltimore, Md.
October 16, 1956
2. "Thyroid Disease in Children"
Southern Medical Association, Washington, D. C.
November 12, 1956
3. "Portal Hypertension"
St. Francis Hospital and Sanatorium, Long Island, N. Y.
November 22, 1956
4. "Treatment of the Post-Thrombotic Leg"
Baltimore City Medical Society, Baltimore, Md.
January 4, 1957
5. "Portal Hypertension"
Fort Howard Veterans Hospital, Fort Howard, Md.
April 24, 1957
6. "Cylindromatous Tumors of Salivary Glands"
Annual Meeting, Medical and Chirurgical Faculty, Baltimore, Md.
May 1, 1957
7. "Inflammatory Diseases of the Small and Large Intestine"
West Virginia Academy of General Practice, Charleston, W. Va.
May 5, 1957
8. "Mucoepidermoid Salivary Gland Tumors"
VIth International Congress of Otolaryngology
Johns Hopkins Hospital, Baltimore, Md.
May 11, 1957
9. "The Department of Surgery in the University of Maryland"
Peninsula General Hospital, Salisbury, Md.
May 20, 1957

LECTURES

Dr. Harry C. Hull

1. "Paralytic Ileus"
Church Home and Hospital, Baltimore, Md.
May 2, 1957
2. "Colon"
Fort Howard Veterans Hospital, Fort Howard, Md.
May 9, 1957
3. "Breast"
Fort Howard Veterans Hospital, Fort Howard, Md.
May 16, 1957
4. "Thyroid"
Fort Howard Veterans Hospital, Fort Howard, Md.
May 23, 1957
5. "Gastric Ulcer"
Fort Howard Veterans Hospital, Fort Howard, Md.
June 6, 1957
6. "Pancreas"
Fort Howard Veterans Hospital, Fort Howard, Md.
June 13, 1957
7. "Surgery of the Spleen"
Fort Howard Veterans Hospital, Fort Howard, Md.
June 20, 1957
8. "Jaundice"
Fort Howard Veterans Hospital, Fort Howard, Md.
June 27, 1957

LECTURES

Dr. Arlie R. Mansberger

1. "Observations in Experimental Mechanical Trauma"
Management of Mass Casualties Course
Walter Reed Army Institute of Research, Washington, D. C.
September, 1956
December 13, 1957
March 28, 1957
2. "The Role of Ballistic Phenomena in Wound Contamination"
"Bacterial Factors in Irreversible Shock from Massive Soft Tissue Wounds"
Army Medical Research Laboratories, Fort Knox, Kentucky
January 21, 1957
3. "Bacterial Factors in Irreversible Shock from Massive Soft Tissue Wounds"
Wicomico County Medical Society, Wicomico County, Maryland
March 11, 1957

4. "The Correlation of Wound Bacteriology and Survival Time in Experimental Mechanical Trauma"
Maryland National Guard (Medical Officer's Seminar)
104th Med. Bn. Armory
March 14, 1957
5. "The Role of the Rural Physician in the Management of Mass Casualties"
St. Mary's County Medical Society, St. Mary's County, Maryland
6. "Bacterial Factors in Irreversible Shock from Massive Soft Tissue Wounds"
House Staff—Union Memorial Hospital, Baltimore, Md.
February, 1957
7. "Bacterial Factors in Irreversible Shock from Massive Soft Tissue Wounds"
House Staff—Church Home and Hospital, Baltimore, Md.
June 5, 1957

LECTURES

Dr. E. R. Shipley

1. "Physiology of Trauma"
Academy of General Practice, Wilmington, Del.
October 14, 1956 (Given by Drs. Shipley and Sheppard) 3-4 hr. session
2. "Peptic Ulcer" (Member of a panel)
Naval Hospital, San Diego, California
March, 1957

LECTURES

Dr. George H. Yeager

1. "Thyroiditis"
Southern Medical Association, Washington, D. C.
November 12, 1956
2. "Diverticulitis"
South Eastern Surgical Congress, Richmond, Virginia
October, 1956
3. "Diagnosis and Treatment of Peripheral Vascular Disease"
Church Home and Hospital, Baltimore, Md.
January, 1957
4. "Problems of Arterial Thrombosis and Vascular Prosthesis"
Myers Clinic, Phillipi, West Virginia
September, 1956

Guest Speakers from the Department: Student Seminars—1956-57

Dr. Paul W. Sanger, Charlotte, N. C., November 3, 1956

"Arterial Prostheses"

Dr. Perry B. Hudson, (Asst. Prof. Urology), Columbia University, New York, November 17, 1956

"Testicular Tumors"

Dr. G. Burroughs Mider, (Assoc. Director Cancer Research), National Cancer Institute, Bethesda, Maryland, January 12, 1957

“Cancer of the Colon”

Dr. Wm. W. McKinney, Fort Worth, Texas, January 19, 1957
“Surgical Treatment of Parkinson’s Disease”

Dr. George Crile, Jr., Cleveland Clinic, January 26, 1957
“Carcinoma of Breast, Thyroid and Colon”

Dr. Murray M. Copeland, (Prof. of Oncology), Georgetown University Hospital,
Washington, D. C., March 9, 1957

“Tumors of Bone”

Dr. Samuel F. Marshall, Lahey Clinic, Boston, March 16, 1957

“Cancer of the Stomach”

SPECIAL LECTURES

Mr. R. H. O. B. Robinson, Senior Surgeon and Urologist, St. Thomas’ Hospital,
London, England, May 1, 1957

“Carcinoma of Male Genitalia”

Mr. H. Gordon Ungley, Gordon Hospital, for Rectal Diseases, London, England, June
10, 1957

“Diagnosis of Rectal Cancer”

PUBLICATIONS

BUXTON, R. W.: Thyroid disease in children, Southern Medical Journal, (February 19) 1957.
BUXTON, ROBERT W.: Treatment of the post-thrombotic leg, Maryland State Medical Journal,
6: 139-151, 1957.
BUXTON, R. W. and STRAFFON, R. A.: Deep vein ligation in the post-phlebitic extremity, Surgery,
41: 471-477, 1957.
BUXTON, R. W. and STRAFFON, R. A.: Progress in Surgery—1956, Americana Annual, 757-759,
1957.
PACKARD, A. G., JR.: The enzymatic debridement of wounds, The American Surgeon, 22:543-548,
1956.
PESSAGNO, D. J.: Cystic disease of the breast, American Surgeon, 23: 65-72, 1957.
OSTER, R. H.; SHIPLEY, E. R.; POLLACK, B. R.; PROUTT, L. M.: Experiments in Physiology,
second revision, Maran Typographers and Printers, Baltimore, 1957.
SHIPLEY, E. R.: The problem of the intestines, Bull. Sch. of Med., Univ. of Md., 41:115,
(October) 1956.
WILLIAMSON, R. J., HAYES, M. A. and HEINDENREICH, W. F.: Endocrine mechanisms involved
in water and sodium metabolism during operation and convalescence, Surgery: 41: 353-386,
1957.

OPERATIONS

GENERAL SURGERY

Thorax:

	Private	Clinical
Thoracotomy for trauma	0	1
Repair diaphragmatic hernia	2	1
Other	5	6
	7	8

OPERATIONS
GENERAL SURGERY (Continued)

	Private	Clinical
<i>Breast:</i>		
Biopsy or excision of lesion	100	79
I & D abscess	0	25
Simple Mastectomy	5	2
Simple Mastectomy with axillary node dissection	10	0
Radical Mastectomy	20	15
	<hr/> 135	<hr/> 121
<i>Stomach and Duodenum:</i>		
Gastrectomy—total	0	1
Gastrectomy—partial	22	25
Gastrectomy—partial with vagotomy	5	5
Biopsy of stomach	1	0
Rammstedt procedure	3	4
Local excision of lesion of the stomach	0	1
Gastrostomy	3	5
Gastrotomy	6	3
Gastrorrhaphy	1	1
Closure of perforation of duodenal ulcer	5	14
Vagotomy (alone) (postgastroenterostomy)	2	0
Gastroenterostomy	3	10
Gastroenterostomy with vagotomy	1	0
Jejunostomy	1	1
Resection of marginal ulcer	1	0
Others	0	0
	<hr/> 54	<hr/> 70
<i>Stomach and Esophagus:</i>		
Esophagogastrectomy	1	0
Esophagectomy	0	1
Excision of diverticulum	0	0
Closure of perforation of esophagus	0	0
Others	0	1
	<hr/> 1	<hr/> 2
<i>Spleen:</i>		
Splenectomy for hypersplenism	3	3
Splenectomy for rupture of spleen	0	3
Others	4	1
	<hr/> 7	<hr/> 7
<i>Gallbladder:</i>		
Cholecystectomy (only)	75	59
Cholecystectomy and choledochotomy	36	8

OPERATIONS
GENERAL SURGERY (Continued)

	Private	Clinical
Cholecystostomy	1	3
Liver (biopsy only)	6	8
Suturing of liver (blunt trauma)	1	2
	<hr/> 119	<hr/> 80
<i>Secondary Biliary:</i>		
Cholecystectomy	0	0
Choledochostomy	3	0
Choledochoplasty	0	0
Choledochoduodenostomy	1	0
Others	0	1
	<hr/> 4	<hr/> 1
<i>Pancreas:</i>		
Biopsy (only)	2	2
Cholecysto- or dochoduodenostomy or enterostomy	5	1
Splanicectomy	1	4
Pancreaticoduodenostomy or enterostomy	0	0
Pancreatectomy	2	0
Marsupialization of, cyst of	0	0
Sphincterotomy	0	1
Excision of cyst	1	0
	<hr/> 11	<hr/> 8
<i>Retroperitoneal Tumors:</i>		
Biopsy of	0	0
Excision of	0	1
	<hr/> 0	<hr/> 1
<i>Small Intestine:</i>		
Lysis of adhesions (intestinal obstruction)	11	11
Resection for gangrene (secondary to mechanical obstruction	1	14
Enterocenterostomy or enterocolostomy	7	6
Closure of fistula (simple or enterocutaneous)	3	1
Revision of ileostomy	0	0
Closure of perforation	2	1
Noble Procedure	0	0
Intussusception	0	2
Others	4	3
	<hr/> 28	<hr/> 38

OPERATIONS
GENERAL SURGERY (Continued)

	Private	Clinical
<i>Colon and Rectum:</i>		
Abdominoperineal resection	5	8
Colectomy, left (anterior resection).....	18	8
Colectomy, right	13	4
Colostomy construction	13	9
Colostomy closure	5	5
Colostomy revision	4	6
Colectomy, partial (wedge resection).....	6	8
Colotomy (local excision of polyps, etc.).....	5	4
Total colectomy	2	1
Perineal resection	1	1
Cecostomy	5	7
Swenson Procedure	1	0
Others	2	2
	<hr/> 80	<hr/> 63
<i>Appendix:</i>		
Appendectomy	133	87
Drainage of appendiceal abscess.....	5	14
	<hr/> 138	<hr/> 101
<i>Adrenal:</i>		
Partial excision	1	0
Total excision	0	0
	<hr/> 1	<hr/> 0
<i>Abdominal Wall:</i>		
Inguinal herniorrhaphy	223	191
Femoral herniorrhaphy	8	8
Epigastric herniorrhaphy	4	5
Umbilical herniorrhaphy	8	40
Ventral herniorrhaphy	19	10
Secondary suture of dehiscence.....	2	12
Diaphragmatic herniorrhaphy (via abdominal approach) ..	2	0
Others	18	9
	<hr/> 284	<hr/> 275
<i>Ano-Rectal:</i>		
Hemorrhoidectomy	81	48
Fissure-in-ano excision	10	4
Fistula-in-ano excision	17	19
Pectinotomy	4	0
Anoplasty	1	2
Polyp removal (rectal).....	16	3

OPERATIONS GENERAL SURGERY (Continued)

	Private	Clinical
I & D perianal abscess.....	9	30
Biopsy of sigmoidoscopy in O.R.	1	2
Others	0	2
	<hr/> 139	<hr/> 110
<i>Skin and Subcutaneous Tissue:</i>		
Local excision lesion of skin or subcutaneous tissue.....	88	49
Wide excision of lesion (Melanoma, etc.).....	14	8
Debridement of wound.....	9	15
Suture of laceration.....	10	15
Secondary closure of wound.....	2	11
Skin graft and reconstructive procedure.....	22	24
Burn dressing	2	50
Skin graft	30	105
Muscle biopsy	3	12
Implant cobalt or radium.....	22	9
Drainage of superficial abscess.....	17	21
Incision and drainage of pilonidal abscess.....	2	2
Excision of pilonidal sinus or cyst.....	12	8
Skin biopsy	3	6
Bone marrow biopsy.....	3	3
Others	3	1
	<hr/> 242	<hr/> 339
<i>Lymphatic System:</i>		
Biopsy (not abdominal).....	23	38
Radical excision (except neck).....	2	1
Others	0	2
	<hr/> 25	<hr/> 41
<i>Arterial System:</i>		
Aortic resection for aortic graft.....	1	0
Peripheral arterial graft.....	0	1
Endarterectomy	4	5
Ligation of artery.....	0	0
Excision of A-V fistula.....	0	1
Sympathectomy (not for hypertension).....	30	43
Others	4	13
	<hr/> 39	<hr/> 63
<i>Venous System:</i>		
Portacaval anastomosis	1	1
Splenorenal anastomosis	1	0
Ligation and stripping of saphenous vein.....	75	24

OPERATIONS
GENERAL SURGERY (Continued)

	Private	Clinical
Ligation of saphenous vein.....	12	4
Local excision of veins.....	0	0
Thrombectomy	1	0
Hi resection stomach for esophageal varices.....	0	1
Ligation of esophageal varices.....	1	0
Other	0	1
	<hr/> 91	<hr/> 31

Hand and Tendons:

Incision and drainage of space abscess.....	0	11
Exploration of tendon sheaths.....	4	3
Primary tenorrhaphy	14	24
Repair of peripheral nerve.....	1	2
Transplant of peripheral nerve.....	0	1
Palmar fasciectomy	0	3
Others	4	1
	<hr/> 23	<hr/> 45

Orthopaedic and Extremities:

Amputation, mid thigh.....	11	24
Amputation, tibial	6	12
Amputation, other type, leg.....	3	5
Amputation, toe	7	11
Amputation, arm	1	1
Amputation, finger	5	6
Excision of ingrown toenail.....	6	0
Hemipelvectomy	0	0
Open and closed reduction of fracture in Operating Room	58	2
Excision of Baker's Cyst.....	2	1
Excision, ganglion of foot or wrist.....	7	3
Osteotomy	2	0
	<hr/> 138	<hr/> 65

Thyroid:

Total thyroidectomy with neck dissection.....	0	1
Total thyroidectomy	1	3
Subtotal thyroidectomy	51	18
Biopsy of thyroid.....	3	0
Parathyroid adenoma	1	0
Others	3	1
	<hr/> 59	<hr/> 23

OPERATIONS GENERAL SURGERY (Continued)

Private Clinical

Infection:

Drainage of subphrenic abscess.....	1	4
Drainage of subhepatic abscess.....	1	0
Drainage of pelvic abscess.....	2	2
Drainage of intra-abdominal abscess.....	3	3
Others	2	3
	<hr/> 9	<hr/> 12

Miscellaneous:

Exploratory laparotomy with diagnosis not made.....	5	4
Exploratory laparotomy, stab wound.....	0	15
Exploratory laparotomy, gunshot wound.....	1	4
Exploratory laparotomy with lysis of adhesions.....	23	18
	<hr/> 29	<hr/> 41

Head and Neck:

Branchiogenic cyst removal.....	2	0
Commando	0	0
Radical neck dissection.....	1	5
Mandible resection, partial.....	1	1
Excision of cervical mass (Tumor mass).....	4	2
Excision lesion of accessory sinus.....	1	0
Excision lesion of gingiva.....	1	0
Excision lesion of mouth or lip.....	2	2
Biopsy	0	1
Excision lesion of nose.....	1	0
Excision lesion of palate.....	0	1
Excision lesion of parotid gland.....	5	3
Excision lesion of submaxillary gland.....	3	1
Hemiglossectomy or excision lesion of tongue.....	2	2
Laryngectomy total	1	0
Laryngectomy partial	1	1
Laryngoscopy (biopsy)	0	0
Biopsy larynx	0	1
Excision of thyroglossal cyst.....	2	1
Closure of pharyngostoma.....	0	0
Others	6	22
	<hr/> 33	<hr/> 43

OPERATIVE DEATHS—GENERAL SURGERY

CLINICAL SERVICE

Emergency: 2

Hosp. No.	Initial	Primary Diagnosis	Operation	Cause of Death	Autopsy
101-3-93	J.S.	Ruptured spleen Multiple fractures (ribs, rt. arm)	Splenectomy	Acute renal failure	Med. Exam.
134-2-66	G.W.	Blunt trauma with intra-abdominal injury Cranio-cerebral trauma Hemothorax	Repair, extensive lacteration, liver Close thoracotomy	Possible cerebral edema	Med. Exam.

Gastrointestinal: 11

101-9-26	L.S.	Perforated duodenal ulcer	Closure of perforation	Peritonitis	No
013-1-69	B.D.	Biliary cirrhosis Cholangitis	Common duct exploration Liver biopsy	Acute renal failure	Yes
042-9-58	J.T.	Cholecystitis	Liver biopsy	Hepatic failure	Yes
080-7-24	D.B.	Chronic ulcerative colitis	Colectomy	Peritonitis septicemia	Yes
098-9-27	G.B.	Strangulation Obstruction, ileum	Resection of ileum	Peritonitis	No
134-9-64	A.D.	Small bowel obstruction	Resection of jejunum	Peritonitis	Yes
051-8-96	F.K.	Appendicitis with perforation	Appendectomy	Generalized peritonitis	Yes
134-2-64	E.R.	Acute appendicitis	Appendectomy	Unknown Possible perforation sub diaphragmatic abscess Shock	No
135-0-93	E.W.	Pancreatic cyst	Resection of pancreatic cyst	Inanition	No
135-5-86	A.V.D.	Perforated duodenal ulcer	Closure perforated duodenal ulcer	Cardiac failure	No

OPERATIVE DEATHS—GENERAL SURGERY

CLINICAL SERVICE

Hosp. No.	Initial	Primary Diagnosis	Operation	Cause of Death	Autopsy
082-9-00	W.V.	Large bowel obstruction	Cecostomy Ileo-transverse colostomy Closure cecostomy	Cerebral vascular accident	Yes
<i>Cancer: 8</i>					
007-3-83	A.R.	Carcinoma of the stomach Bullous emphysema	Subtotal gastric resection Splenectomy	Unknown Possible spontaneous hemothorax	No
103-8-04	W.S.	Carcinoma of the Stomach (Obstructive)	Gastroenterostomy	Carcinomatosis	Yes
017-7-12	M.B.	Intestinal obstruction due to recurrent carcinoma (Carcinoma of cecum)	Resection of the small bowel Ileo-ileostomy	Carcinomatosis Peritonitis Wound dehiscence Shock	Yes
106-6-21	B.J.	Carcinoma of the larynx Esophageal obstruction	Gastrostomy	Peritonitis	Yes
108-8-65	D.C.	Carcinoma of the hepatic flexure	Cecostomy	Coronary thrombosis	No
134-2-77	M.B.	Carcinoma of the descending colon	Paliative resection	Unknown Probable massive atelectasis	No
041-9-17	E.J.	Carcinoma of the stomach	Gastrojejunostomy	Carcinomatosis	Yes
134-3-84	J.LeD.	Carcinomatosis (Primary site undetermined)	Exploratory laparotomy Liver biopsy	Carcinomatosis	No
<i>Cardiovascular: 2</i>					
109-9-24	R.N.	Arteriosclerotic peripheral vascular disease Gangrene, right foot	Mid thigh amputation	Congestive failure	No

OPERATIVE DEATHS—GENERAL SURGERY

CLINICAL SERVICE

Hosp. No.	Initial	Primary Diagnosis	Operation	Cause of Death	Autopsy
109-1-72	M.L.	Arteriosclerotic peripheral vascular disease Gangrene, left foot	Supracondylar amputation	Probable myocardial infarction	Med. Exam.

Miscellaneous: 1

095-0-49	L.W.	Non-toxic nodular goiter	Subtotal thyroidectomy	Coronary occlusion Pulmonary embolus	Yes
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PRIVATE SERVICE

Emergency: 2

106-7-28	D.K.	Traumatic sever- ance of the femoral artery, femoral vein and sciatic nerve Massive soft tissue injury	Ligation, femoral vein	Crush syndrome with acute renal failure	Yes
084-3-36	C.W.	Blunt trauma Perforation of the jejunum	Closure of perforation	Peritonitis	Med. Exam.

Gastrointestinal: 4

108-2-42	C.B.	Pancreatitis with jaundice	Exploratory laparotomy Choledocotomy Sphincterotomy	Uremia	Yes
101-7-15	M.W.	G. I. hemorrhage	Exploratory laparotomy	Shock	Yes
107-0-99	M.H.	Diverticulitis with perforation Chronic vesico vaginal fistula	Resection fistula Repair of cecostomy	Recurrence of fistula Malnutrition Uremia	No
050-1-35	I.D.	Chronic cholecystitis	Cholecystectomy	Unknown proba- ble cerebral embolus	No

OPERATIVE DEATHS—GENERAL SURGERY

PRIVATE SERVICE

Cancer: 5

Hosp. No.	Initial	Primary Diagnosis	Operation	Cause of Death	Autopsy
101-7-38	E.K.	Carcinoma of the transverse colon (Obstructed)	Cecostomy	Shock	No
099-9-97	C.B.	Carcinoma of the esophagus	Esophago-gastrectomy	Mediastinitis	Yes
107-4-72	M.C.	Leiomyosarcoma of the jejunum (Perforated)	Obstructive resection	Peritonitis	Yes
018-7-41	E.P.	Adenocarcinoma of the rectum	Anterior resection	Acute pancreatitis Lobar pneumonia	Yes
099-5-11	W.M.	Carcinoma of the sigmoid colon with obstruction	Cecostomy Sigmoid resection Closure of cecostomy	Uremia	Yes

Cardiovascular: 1

098-9-46	F.B.	Abdominal aortic aneurysm ruptured into duodenum	Endo-aneurysmorrhaphy	Shock	No
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Miscellaneous: 1

009-6-54	A.B.	Subphrenic abscess, left	Incision and drainage	Retro-peritoneal hematoma Pancreatitis Shock	Yes
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NONOPERATIVE DEATHS

CLINICAL SERVICE

General Surgery: 17

101-7-25	H.G.	Cachexia secondary to metastatic carcinoma of the prostate	Shock		No
100-5-63	W.H.	Suspected choangioma	Primary diagnosis		No
065-9-25	B.W.	Carcinomatosis (adenocarcinoma of the ovary)	Primary diagnosis		No

NONOPERATIVE DEATHS

CLINICAL SERVICE

Hosp. No.	Initial	Primary Diagnosis	Cause of Death	Autopsy
106-1-46	L.W.	Second and third degree burns, 80% body surface	Shock	No
083-9-96	J.G.	Carcinoma of the maxillary antrum	Carcinomatosis	No
097-0-68	G.P.	Inflammatory carcinoma of the breast	Carcinomatosis	No
107-7-48	J.T.	Second and third degree burns, 50% body surface	Septecemia	Yes
100-7-41	L.B.	Carcinoma of the rectum	Carcinomatosis	Yes
107-1-77	A.J.	Possible carcinoma of the colon	Carcinomatosis Myocardial infarction	No
020-2-47	G.J.	Perforated duodenal ulcer	Coronary artery occlusion	Yes
134-5-97	H.L.	60% burns, second and third degree	Probable septicemia	Med. Exam.
109-7-39	T.McG.	70% burns, second and third degree	Probable septicemia	Med. Exam.
000-8-47	C.S.	Fractured mandible Chronic Osteomyelitis	Malnutrition Shock Hemorrhage	No
109-8-62	N.R.	Arteriosclerotic peripheral vascular disease with gangrene, lower extremities bilaterally	Cardiac failure	Yes
109-5-58	W.S.	Second and third degree burns, 45% body surface	Acute renal failure	Med Exam.
108-7-18	I.C.	Perforated duodenal ulcer	Peritonitis	Yes
109-6-55	C.C.	Acute hemorrhagic pancreatitis	Cardiac arrest	Yes

PRIVATE SERVICE

General Surgery: 16

100-0-49	J.M.	Thrombophlebitis	Probable pulmonary embolus	No
106-3-41	H.W.	Laennec's cirrhosis	Hepatic failure	Yes
101-3-69	J.A.	Carcinoma of the breast	Carcinomatosis (Cerebral metastasis)	No

NONOPERATIVE DEATHS

PRIVATE SERVICE

Hosp. No.	Initial	Primary Diagnosis	Cause of Death	Autopsy
080-4-08	G.B.	Carcinoma of the rectum	Pulmonary embolism	Yes
101-3-72	S.S.	Carcinoma of the stomach, perforated	Peritonitis	Yes
056-5-32	H.S.	Carcinoma of the ovary	Carcinomatosis	No
070-4-03	V.P.	Carcinoma of the left breast	Carcinomatosis	No
107-9-04	J.C.	Carcinoma of the stomach	Carcinomatosis	Yes
108-2-35	G.M.	Carcinoma of the pancreas	Carcinomatosis	No
075-9-48	N.S.	Ulcerative colitis	Uremia Malnutrition	No
108-0-12	E.S.	Chronic encephalitis	Cerebral edema Primary diagnosis	Yes
107-2-63	M.G.	Carcinoma of the breast	Carcinomatosis	No
107-7-91	F.E.	Intertrochanteric fracture, right femur	Probable cerebro vascular accident	No
053-4-58	L.G.	Fibrosarcoma, latissimus dorsi, recurrent	Primary diagnosis	No
134-1-98	I.D.	Chronic pyelonephritis	Uremia	Yes
072-2-23	W.W.	Lannaec's cirrhosis	Bleeding esophageal varices and hepatic failure	Yes

OPERATIVE PROCEDURES PERFORMED AT THE MARYLAND STATE
PENITENTIARY BY THE UNIVERSITY OF MARYLAND SURGICAL
RESIDENTS DURING APRIL AND MAY, 1957

Date	Patient	Operation
4-4-57	C.C.	Appendectomy and cholecystectomy
4-4-57	R.J.	Right inguinal herniorrhaphy
4-4-57	J.W.	Left inguinal heriniorrhaphy
4-8-57	W.P.	Cholecystectomy
4-10-57	B.S.	Right inguinal herniorrhaphy
4-10-57	A.H.	Hemorrhoidectomy
4-11-57	C.T.	Bilateral herniorrhaphy
4-15-57	B.P.	Extraction of knife blade in shoulder
4-15-57	R.B.	Excision of fistula in ano
4-17-57	S.L.	Exploratory laparotomy

OPERATIVE PROCEDURES PERFORMED AT THE MARYLAND STATE
PENITENTIARY BY THE UNIVERSITY OF MARYLAND SURGICAL
RESIDENTS DURING APRIL AND MAY, 1957

Date	Patient	Operation
4-17-57	J.K.	Bilateral ligation varicose veins with stripping
4-23-57	C.J.	Hemorrhoidectomy
4-24-57	L.A.	Hemorrhoidectomy
4-24-57	G.W.	Excision tumor left axilla
4-25-57	D.T.	Left inguinal herniorrhaphy
4-25-57	W.E.	Bilateral herniorrhaphy
4-25-57	E.B.	Excision hydrocele
4-29-57	N.W.	Left inguinal herniorrhaphy
4-29-57	L.F.	Excision of fistula in ano
5-1-57	A.P.	Excision ganglion right wrist
5-1-57	J.P.	Hemorrhoidectomy
5-1-57	M.McC.	Excision fatty tumor, middle finger right hand
5-1-57	W.H.	Excision accessory parotid gland
5-2-57	C.V.	Right inguinal herniorrhaphy
5-2-57	V.W.	Excision pilonidal cyst
5-6-57	E.R.	Excision left medial miniscus
5-9-57	J.J.	Hemorrhoidectomy
5-9-57	H.D.	Peri-rectal abscess—incision and drainage
5-13-57	B.H.	Gangrenous small bowel due to adhesions— Resection of 2½' jejunum
5-15-57	R.L.	Right inguinal herniorrhaphy
5-15-57	D.D.	Bilateral herniorrhaphy
5-15-57	C.H.	Excision thyroglossal cyst and duct
5-16-57	J.S.	Palmar fasciectomy for dupuytren's
5-16-57	R.E.	Hemorrhoidectomy
5-20-57	C.C.	Hemorrhoidectomy
5-20-57	D.B.	Hemorrhoidectomy
5-20-57	H.B.	Excision of fistula in ano
5-20-57	J.B.	Excision exostosis pubic bone
5-22-57	R.M.	Cholecystectomy and appendectomy
5-22-57	W.C.	Excision of undescended testi
5-23-57	R.L.	Bilateral ligation and stripping of varicose veins
5-23-57	E.W.	Excision of fistula in ano
5-23-57	W.C.	Plastic repair of lip
5-23-57	E.D.	Excision of parotid duct stone
5-27-57	P.C.	Hemorrhoidectomy
5-27-57	J.K.	I & D periurethral abscess
5-27-57	G.W.	Hemorrhoidectomy
5-29-57	A.S.	Subtotal gastric resection
5-29-57	F.J.	Hemorrhoidectomy

ORTHOPEDIC SURGERY

This division of surgery is under the guidance of Dr. Allen Voshell. At the time of this writing it is the least satisfactory of the surgical divisions from the viewpoint of a discipline for teaching house officers and students the rudiments of clinical orthopedic surgery. The background of this (or any other orthopedic) division may offer some insight into its many difficulties. For many years, and to the present time, the treatment of acute fractures, a modicum of reconstructive surgery, as well as much of the surgical therapy of soft tissue lesions in the vicinity of ligaments and joints has been considered the province, not only of the orthopedic surgeon, but of the general surgeon. The cleavage of orthopedic surgery from general surgery, while only moderately recent, has never been acute, abrupt or complete. For this reason the specialty has suffered much and frequently from "pirating" at the hands of the general surgeon and as a consequence a stern effort to build up an active and aggressive orthopedic division has been dissipated through lack of support and insistence.

This specialty suffers from another handicap. The healing of bones is a long and slow process and the often required plaster of Paris supports for these healing structures commonly necessitates prolonged bed rest and tedious, almost interminable nursing care. Thereby a hospital bed occupancy may and commonly is reckoned in terms of months and not of days or weeks.

These two observations alone supply a large insight into the outstanding need of this division—beds, for both private and ward patients.

Orthopedic surgeons have for a goodly number of years been largely concerned with the physical measures of rehabilitation of patients. The need for emphasis upon this late aspect of bony and soft tissue injury is nowhere more urgent or more deeply appreciated than in this field. For the most part the means at the disposal of orthopedists for emphasis upon this aspect of disease have been minimal and grudging. In recent years a new and aggressive group of physician specialists in physical medicine and rehabilitation has sprung up and taken command of this field. The result has been an outpouring of money, space and technical assistance far in excess of that ever gained or hoped for by the orthopedist. He is properly disgruntled. On the other hand it is to be acknowledged that additional knowledge, more elaborate techniques, improved care and an increased salvage rate of patients can be pointed to with some pride by the physical therapist.

It is foreseen that the Department of Physical Medicine and Rehabilitation will be largely supplied with personnel, apparatus, and equipment which will augment most effectively the work in the Division of Orthopedic Surgery. In this way a second great need in this division will be supplied.

Until the past fiscal year, this division has been without a resident house staff for several years. During this hiatus accreditation for training in this specialty has been on qualified and on a year-to-year basis. This, combined with the paucity of clinical material has made the procurement of residents difficult and precarious.

The best solution of these difficulties at this moment is being planned for the coming year. The program of teaching and training as envisioned now will be set at one and one-half years of training in adult orthopedic surgery and fractures at the

University Hospital; one year of orthopedic surgery in children at Kernan's Hospital for Crippled Children and a six months "visiting service" at the Rosewood Training School in Owings Mills, Maryland, and at the Montebello State Hospital, for training in treatment and rehabilitation of patients with cerebral palsy and chronic disease. This rather comprehensive program combined with a planned instructional period, probably in anatomy (possibly, upon demand, in the research laboratory) should be both attractive and afford a more than satisfactory training in clinical orthopedic surgery.

Teaching of medical students in this division encompasses both the junior and senior years. A series of didactic lectures is given in the second semester of the junior year plus instruction in orthopedic diagnosis and examinations in the out-patient clinic during one-third of the surgical quarter. Only a small fraction of senior students have a clinical service in orthopedic surgery. One-fourth of this class is assigned to this division for one month of instruction. During this period, ward rounds and bedside discussions are scheduled and carried on at the University and Kernan's Hospital for Crippled Children as one part of the senior student's experience.

A program of research, either at a basic level or one devoted to clinical problems, is non-existent in this division. This is recognized and deprecated by its members, all of whom serve in a part-time capacity. The lack of a well supported group of junior associates and men in training has not made possible a solution of this defect. It reflects, in some degree, an almost universal trend among orthopedic surgeons today (A recent American College of Surgeons publication, *Surgical Forum*, 1956, records 9 papers on orthopedic research projects from seven medical schools. This represents less than 5 percent of the reported papers.).

During the preceding year this division has been supplied handsomely by the Women's Board of the University Hospital with funds for the purchase of operation room and fracture equipment.

* * *

Resident Staff: Resident—Dr. Nick A. Valis

Publication:

VOSHELL, A. F.: Anatomy of the knee joint, American Academy of Orthopedic Surgeons, Instructional Course Lecture. **VIII**, 1956.

ORTHOPEDIC SURGERY

	Private	Clinical
Abscess, I & D.	2	4
Achilles tendon lengthening.	0	0
Amputation, revision.	0	0
Arthrorodesis.	10	9
Arthroplasty.	1	1
Arthrotomy.	6	1
Baker's cyst, excision.	1	1
Biopsy.	0	5
Bone cyst, excision or curettage.	0	2
Bone graft.	4	1
Bone tumor, excision.	3	3
Bunionectomy.	6	2
Capsulotomy.	0	1
Cast, body.	4	10
leg.	5	9
miscellaneous.	6	4
Closed reduction, fracture and dislocations.	45	57
Crutchfield tongs.	1	0
Excision, bursa.	1	2
exostosis.	3	0
synovia.	0	0
Exploration, tendon sheath.	0	0
Extraction of nail or plate.	0	2
Fasciotomy.	0	0
Hip prosthesis.	1	1
Insertion of nail pin.	4	16
Laminectomy.	8	0
Laminectomy with fusion.	4	2
Miniscusectomy.	5	0
Miscellaneous (includes manipulation).	3	2
Muscle transplant.	0	0
Neurolysis (division).	0	1
Open reduction, fractures and dislocations.	30	60
Ostectomy, partial (sequestrectomy).	1	4
Ostectomy.	6	1
Patellectomy.	1	1
Suterooperation.	0	0
Saucerization.	1	5
Osteotomy.	0	3
	162	210

OPERATIVE DEATHS—SURGICAL SPECIALTIES

CLINICAL SERVICE

Orthopedic Surgery: 7

Hosp. No.	Initial	Primary Diagnosis	Operation	Cause of Death	Autopsy
009-7-16	J.L.	Intertrochanteric fracture, left femur	Open reduction	Cerebral vascular accident	No
100-4-94	E.S.	Fracture surgical neck, left femur	Open reduction	Broncho-pneumonia	No
099-9-58	A.F.	Fracture surgical neck, right femur	Open reduction	Probable cerebral accident	No
106-2-59	C.S.	Intertrochanteric fracture, right femur	Open reduction	Probable pulmonary embolus	No
134-5-04	H.M.	Intertrochanteric fracture, right femur	Open reduction	Probable coronary thrombosis	No
134-2-48	W.N.	Intertrochanteric fracture, left femur	Open reduction	Probable cerebral vascular accident	No
109-2-61	S.W.	Intertrochanteric fracture, right femur	Open reduction	Pulmonary embolus	Med. Exam.

NONOPERATIVE DEATHS

CLINICAL SERVICE

Orthopedic Surgery: 1

Hosp. No.	Initial	Primary Diagnosis	Cause of Death	Autopsy
100-2-76	C.T.	Intertrochanteric fracture, right femur	Probable cerebral vascular accident	No

UIROLOGY

The Division of Urology is under the direction of Dr. John D. Young, Jr. During the past year the training of house officers and the teaching of medical students was done solely at University Hospital. Approximately six ward patient beds are assigned to the resident staff of this division and it is from these beds that the essential bedside teaching and training is done. This division maintains an active out-patient service which, earlier in the year, met patients four half-days weekly and more recently is seeing patients each week day. A very active cystoscopic unit is maintained in the

hospital and extensive knowledge and experience is made possible through the recent renovation of this latter unit.

This division is seriously handicapped by a shortage of patient beds. Few urologic patients are long-term patients; and, therefore, the division has suffered less because of this defect than have others. Because of the excellent functioning of the cystoscopic unit it has been possible to undertake certain operative procedures here—transurethral prostatectomies—although this location is distinctly less desirable than the main operation room area. This situation, though undesirable, has been abetted by the ease and expedition with which these operations can be scheduled and handled by a well-trained nursing staff, quite in contrast to the situation at present existing in the operation room suite.

Not only is this division handicapped seriously by its lack of ward service beds, but also by its lack of operation room space. No good solution for this situation is immediately available, although it is apparent that the soon to be undertaken enlargement of the operation room floor will solve one of the present difficulties under which this division works. A second hoped-for solution was allocation of ward bed space on the 4B hospital wing, now the site of a surgical compensation ward. To date it has not been possible to realize this hope.

The lack of in-patient beds has been felt in another way by this service—there has been some limitation in the undertaking of prolonged diagnostic or observation procedures on an in-patient basis. A strenuous effort is now being brought to fruition, whereby resident house officers may attain a portion of their training at the Fort Howard Veterans Hospital on a rotational basis. This will augment considerably the clinical experience and training of these men. The urologic program at the Veterans Hospital is under the supervision of Dr. Herman J. Meisel.

A further expansion in clinical experience is being undertaken in the coming year at the Montebello State Hospital in Baltimore. This facility has a large number of chronically ill patients under intense rehabilitational training. Many of these individuals have serious neurologic damage affecting their urinary tract, and considerable knowledge and training can be gained and furnished the young urologic surgeon in the diagnosis of these deficits and the experience essential in the proper care of such patients. A most helpful and sympathetic attitude has been displayed by the physicians at the Montebello Hospital in supporting this program and in equipping a unit suitable for this undertaking.

Extension of teaching and training areas into other institutions has been a means utilized at this moment for making this service a creditable one. It is to be recognized that it is a solution less desirable than one which admits teaching and training under a more closely integrated, more nearly uniform and more closely supervised University service and must be considered for the moment as, in some degree, temporary and subject to the modifications and inherent demands of the non-parent institution.

The teaching of medical school students is an essential function of the urologic division. Experience in the junior year is gained in the out-patient area and is devoted to diagnosis of urologic disease, instrumentation and treatment carried out upon an ambulatory basis. This is a most valuable experience and the realization of this has

brought about some improvement in teaching in this sphere. Further improvement and refinements in teaching techniques are under consideration.

The senior medical students have a limited exposure to this division. It has been possible to assign one-fourth of the surgical section to urology for a period of one month. During this time students have participated in clinical and roentgenologic conferences and have had some introduction to diagnostic instrumentation procedures.

Research Funds * * *

This division was the recipient of a gift of \$5,000 from the estate of Mr. Augustus Lotze of Glen Burnie, Maryland.

Research Projects * * *

This division is engaged currently in differential renal studies with the use of radioactive diodrast clearance measurements as recorded by the use of scintillation counters. This study is being undertaken in conjunction with members of the Division of Radioactive Isotopes.

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Resident Staff: Resident—Dr. C. E. Simons, Jr.

Assistant Residents—Dr. Marcelo Lima and Dr. James R. Powder

LECTURES AND COMMUNITY SERVICES

- (1) "Management of Urinary Calculi"
Panel Discussion at Baltimore City Medical Society—October 5, 1956
Dr. W. W. Scott
Dr. T. B. Connor
Dr. J. D. Young, Jr.
- (2) "Renal Function after Prolonged Ureteral Obstruction"
Mexican Urological Association Meeting, Vista Hermosa, Mexico—
November 2, 1956
Dr. J. D. Young, Jr.
Dr. Leopoldo Gomez Reguera
- (3) "Hypertension and Renal Vascular Disease"
Presented at Central Ohio Urological Society—November 20, 1956
Dr. J. D. Young, Jr.
- (4) "Cancer of the Genito-Urinary Tract"
Written for the Baltimore Chapter of the American Cancer Society for Lay
Publication
Dr. J. D. Young, Jr.
- (5) "Prostatectomy in a Hemophiliac"
Mid-Atlantic Section of the American Urological Association, Virginia Beach,
Virginia—March 20-23, 1957
Dr. J. D. Young, Jr. and
Dr. M. S. Sacks
- (6) "Obstructive Uropathies"
Wicomico County Medical Society—May 13, 1957
Dr. J. D. Young, Jr.

UROLOGY

	Private	Clinical
<i>Urethra:</i>		
Urethral dilations (Male and Female).....	596	118
Urethrotomy	6	0
I & D urethral abscess.....	1	4
Excision urethral diverticulum.....	0	3
	<u>603</u>	<u>125</u>
<i>Female Urethral and External Genitalia:</i>		
Salpingogram	38	26
Proctoscopy	41	30
	<u>79</u>	<u>56</u>
<i>Penis:</i>		
1st stage hypospadias.....	4	3
2nd stage hypospadias.....	5	2
Meatotomy	25	12
Circumcision	24	107
Biopsy	5	4
I & D Abscess.....	2	1
Amputation of phallus.....	1	2
Phallectomy	2	0
	<u>68</u>	<u>131</u>
<i>Scrotum and Contents:</i>		
Amputation scrotum	0	1
Vasectomy	34	1
Biopsy testes	6	5
I & D abscess.....	3	4
I & D tumor.....	3	0
	<u>46</u>	<u>11</u>
<i>Ureter:</i>		
Ureterocystotomy	0	0
Ureterolithotomy	16	4
Uretero-neocystoscopy	1	0
Cystoscopy with manipulation urethral stone.....	6	2
Ureteroplasty	1	0
	<u>24</u>	<u>6</u>
<i>Bladder:</i>		
Cystectomy	6	1
Cystotomy	15	7
Cystoscopy	578	495
Litholapaxy	40	17
T U R or fulguration tumor.....	60	16
T U R Biopsy lesion.....	53	69
Cystoscopy and retrogrades.....	406	269

UIROLOGY

(Continued)

	Private	Clinical
Cystoscopy and endoscopy	59	50
Repair ruptured bladder	0	1
Total cystectomy—isolated uretero-ileostomy	1	0
Segmental resection of bladder	1	0
	<hr/> 1219	<hr/> 925
<i>Prostate:</i>		
T U R, prostate	108	78
Prostatectomy, retropubic, simple	21	18
Prostatectomy, retropubic, radical	1	0
Prostatectomy, suprapubic, simple	10	1
Prostatectomy, surrapubic, radical	10	1
Prostatectomy, perineal, simple	0	0
Prostatectomy, perineal, radical	6	5
	<hr/> 156	<hr/> 103
<i>Kidney:</i>		
Nephrectomy	12	10
Biopsy	3	1
Nephrostomy	8	2
Exploration kidney—removal renal cyst	3	3
Removal cystic kidney	1	0
Partial nephrectomy—repair of ruptured kidney	1	0
Excision kidney cyst	8	0
Nephropexy	1	0
Pyelithotomy	2	4
Pyeloplasty	1	0
Nephro-ureterectomy	1	0
Biopsy	3	3
Orchiopexy	6	1
Orchiectomy	15	12
	<hr/> 65	<hr/> 36
<i>Seminal Vesicles:</i>		
Repair vaginal vesicular fistula	3	3
Vesical lithotomy	1	0
Seminal vesiculectomy	2	0
	<hr/> 6	<hr/> 3
<i>Spermatic Cord:</i>		
Hydrocelectomy	17	8
<i>Epididymis:</i>		
Epididymectomy	1	1
Epididymo-orchietomy	3	0
	<hr/> 4	<hr/> 1

UROLOGY

(Concluded)

	Private	Clinical
<i>Miscellaneous:</i>		
Aortogram	10	7
Differential renal function studies	15	31
Seminal vesiculogram	4	0
Air insufflation	9	6
Biopsy of cervical lymph node	0	1
Ventricular urethral shunt	0	2
Resection of distal portion of ureter with anastomosis of bladder	0	1
I & D perineal abscess	10	7
Exploration lap. biopsy rt. iliac lymph node	0	1
Multiple dissection vesicular urethroplasty	0	1
Foley	0	1
I & D surrapubic abscess	3	0
Hemenephrectomy	2	0
Adrenalectomy	2	1
Diverticulectomy	4	0
Hernioplasty	6	4
	<u>65</u>	<u>63</u>

OPERATIVE DEATHS—SURGICAL SPECIALTIES

CLINICAL SERVICE

Urology Service: 5

Hosp. No.	Initial	Primary Diagnosis	Operation	Cause of Death	Autopsy
101-7-82	J.L.	Urethral stricture Perforation urethra with extravasation and abscess	Excision and drainage Urethral dilatation	Possible acute gastric dilatation with aspiration asphyxia	No
136-0-35	G.H.	Clear cell carcinoma, left kidney	Nephrectomy	Bilateral pulmonary metastasis and cor pulmonale	No
135-0-14	C.S.	Carcinoma of urinary bladder	Fulguration of bladder tumor	Uremia	Yes
102-3-10	G.G.	Benign prostatic hypertrophy	Trans urethral resection	Probable cerebral vascular accident	No
108-3-56	M.H.	Carcinoma of urinary bladder	Cystectomy and construction of ileal bladder	Uremia Cardiac failure	No

OPERATIVE DEATHS—SURGICAL SPECIALTIES

PRIVATE SERVICE

Urology: 3

Hosp. No.	Initial	Primary Diagnosis	Operation	Cause of Death	Autopsy
100-3-51	R.S.	Sarcoma of the prostate with extension to urinary bladder	Cystotomy and biopsy	Hemorrhage, urinary bladder	No
100-9-06	A.S.	Benign prostatic hypertrophy	T. U. R.	Myocardial infarction	Yes
107-9-29	P.T.	Carcinoma of the bladder	Left nephrostomy Biopsy of bladder	Probable pulmonary embolus	No

NONOPERATIVE DEATHS

CLINICAL SERVICE

Urology: 4

Hosp. No.	Initial	Primary Diagnosis	Cause of Death	Autopsy
101-8-59	L.A.	Carcinoma of the urinary bladder	Carcinomatosis	Yes
108-5-35	E.G.	Carcinoma of the left kidney	Uremia and primary diagnosis	Yes
091-5-83	L.M.	Chronic pyelonephritis Hydronephrosis Bladder neck obstruction	Uremia	No
134-9-28	H.G.	Carcinoma of the prostate with metastasis	Bilateral broncho-pneumonia Hemorrhage from the bladder	Yes

NONOPERATIVE DEATHS

PRIVATE SERVICE

Urology: 3

Hosp. No.	Initial	Primary Diagnosis	Cause of Death	Autopsy
101-7-15	G.S.	Benign prostatic hypertrophy	Cardiac failure Corpulmonale	No
080-2-85	M.A.	Carcinoma of the bladder	Carcinomatosis	No
081-6-02	S.B.	Carcinoma of the bladder	Uremia	Yes

NEUROLOGIC SURGERY

This division, as it now exists, came into being in 1954 when Dr. James G. Arnold, Jr. was appointed head of the division. Since that time efforts toward reorganization and improvement in student teaching capacity as well as in the teaching of an increased house officer training load have been painfully slow. Somewhat more than one year ago the entire unit was moved along the fourth floor wing into the Psychiatric area to a 34-36 bed patient site. This was an important and long overdue step and gave to this division a unit for specialized teaching, training and patient care which had been a long sought goal. However, the move brought with it problems which to date have remained insurmountable. Only 75 per cent of the unit's bed capacity has been utilized because of failure to provide nursing care for more than this number of patients. Perhaps the greatest and most urgent reason for moving into this new area was the gaining of some freedom for admission of ward patients. This aspect of the transfer has been wholly defeated. There are now no more ward patient teaching beds than heretofore. The move has freed beds, however, for other services who now occupy these released beds and this has been a helpful effect. At the time of submission of this report, ward patients are allocated seven beds in this area, an occupancy of 26 per cent of the total utilizable bed area. This lack of training and teaching material will shortly affect the adequate training of house officers and, equally important, the ability of this service to attract men of high caliber for training under its direction and superintendence.

This division is unusual and almost unique in that a large emphasis upon pediatric neurologic surgery exists as a result of the skill and interest shown in this field by Dr. Robert M. N. Crosby. Much of the teaching and instruction in this highly specialized aspect of neurosurgery is under his supervision.

A major goal for this division is the providing of a greater ward service area. The geographic location and segregation of these patients is ideal and affords the opportunity of an excellent service for specialized care and training. A corollary to this increased patient load will be a large increase in the out-patient census making this a most valuable diagnostic and teaching area. At this moment the out-patient load is minimal and inadequate for a large teaching load. Student teaching in this division is limited, but for those senior students assigned to the service, intense. Contact with junior students comes about only through prepared lectures given in the second semester. In the senior year, one-fourth of the class is assigned to this division for a period of one month or one-half the section time. Teaching is carried on through daily ward rounds and a series of conferences which include neuroradiology and neuropathology, neurology and electroencephalography. The training of house officers has followed the usual pattern on clinical services at the University Hospital, Mercy Hospital and the Fort Howard Veterans Hospital to each of which places members are assigned in rotation.

Trainees in neurologic surgery are required to devote one year to neuropathology, neuroanatomy, and electroencephalography. The trainee works throughout the year and takes a complete course in neuroanatomy, attends weekly conferences in encephalography and spends an hour weekly in the EEG laboratory. Dr. Robert Moore, Hoff-

berger Fellow, in neurosurgery (1956-1957) was a trainee on this program during the past year.

Six months of a neurosurgical house officer's training is devoted to clinical neurology. He is encouraged to undertake this training with another institution in order to broaden his contacts and experience. During the past year, Dr. John O. Sharrett received this training at the National Hospital, Queen's Square, London, England.

The research activities of this division have been supported by two sources:

(1) \$15,000—Neurosurgical Research Fund (Mt. Ararat Foundation)

(2) \$ 5,000—Hoffberger Research Fund

During the past year Mr. Charles M. Henderson has been a student Fellow in the Division of Neurologic Surgery.

CURRENT RESEARCH PROBLEMS

1. Subarachnoid Cysts—A clinical and pathologic evaluation.
James G. Arnold, Jr., Dorcas H. Padget, William H. Mosberg and John O. Sharrett*
2. Studies on Intracranial Pressure.
Raymond K. Thompson and Charles M. Henderson**
3. The treatment of intracranial aneurysm under hypothermia and total arterial occlusion.
James G. Arnold, Jr. and Raphael Longo

* House Officer

** Student Fellow

CURRENT PUBLICATIONS

1. CROSBY, R. M. N. and DENNIS, J. M.: Subdural collections of fluid in infants and children. I. Visualization of the capsule with thorium dioxide,
Am. J. Roent., Radium Therapy and Nuclear Med. **LXXVI**: 3, (September) 1956.
2. CROSBY, R. M. N. and BAUER, R. E.: Subdural collections of fluid in infants and children. II. Study with radioactive sodium phosphate,
Jour. of Neurosurg., **XIII**: 2, 140-144, 1956.
3. WAGNER, J. A. and SHARRETT, J. O.*: Ischemic hypophyseal necrosis and other pituitary lesions: Incidence in a moderately large autopsy series.
So. Med. J., **49**: 7, 671-678, (July) 1956.
4. PADGET, D. H.: The development of the cranial venous system in man, from the standpoint of comparative anatomy.
Carnegie Inst. of Washington Publ. 611, Contrib. to Embryol., **36**, in press, 1957.

In Preparation:

MOSBERG, W. H.: Extracranial lesions commonly associated with head injuries.

* House officer

PAPERS COMPLETED AND READY FOR PUBLICATION

1. MOSBERG, W. H. and SHERWOOD, S. L.: Catatonic patients treated with cholinesterase.
2. MOSBERG, W. H. and LINDENBERG, R.: Traumatic hemorrhage from the anterior choroidal artery.
3. WAGNER, J. A. and SHARRETT, J. O.*: Ischemic hypophyseal necrosis associated with increased intracranial pressure.

4. KIEL and SHARRETT, J. O.*: Amputation neuroma ocular motor nerve secondary to ruptured aneurysm: with partial regeneration.
5. MOSBERG, W. H. and SHARRETT, J. O.*: Epidural abscess of forty years duration.
6. SCARBOROUGH and SHARRETT, J. O.*: Rib graft cranioplasty.

* House officer

RESIDENT STAFF

Resident

Dr. Rafael Longo-Cordero

Assistant Residents

Hoffberger Fellow

Dr. Herbert S. Bell (2)

Dr. Robert A. Moore

Dr. Yong Won Suh (1)

Dr. Steven S. Malina (1)

Student Fellow

Dr. Israel H. Weiner (1)

Dr. Paul C. Hudson (1)

Charles M. Henderson

STAFF ACTIVITIES

R. M. N. Crosby, M.D.

Elected member of the Advisory Board of the Maryland Society for Mentally Retarded Children (Fall of 1956)

Elected member of Southern Neurosurgical Society—March, 1957

Chosen member of the Harvey Cushing Society—April, 1957

William H. Mosberg, Jr., M.D.

Elected member of Southern Neurosurgical Society—March, 1957

Chosen a member of the Harvey Cushing Society—April, 1957

Appointed to Editorial Committee of the Congress of Neurological Surgeons—August, 1956

Raymond K. Thompson, M.D.

Elected Vice President of the Congress of Neurological Surgeons—November, 1956

Delegate of the Congress of Neurological Surgeons to the International Congress of Neurological Sciences, July, 1957

James G. Arnold, Jr., M.D.

Elected member of the American College of Surgeons—October, 1956

Elected to the Society of Neurological Surgeons—May, 1957

Elected Vice President of the Southern Neurological Society—March, 1957

LECTURES AND COMMUNITY SERVICES

Dr. James G. Arnold, Jr.

Southeastern Pennsylvania branch of the American College of Surgeons, April 6, 1957, at York, Penna.:

“Diagnosis and treatment of craniocerebral injuries”

Panel discussion, Moderator, Southern Neurosurgical Society, March 16, 1957, at Nashville, Tenn.

Dr. Raymond K. Thompson

Maryland Association of Industrial Nurses, Stafford Hotel, September, 1956:

“Neurosurgical Problems in Industry”

Franklin Square Hospital House Staff and Surgical Staff, September, 1956:

“Common neurosurgical diseases”

Surgical Staff Conference, St. Agnes Hospital, April, 1957:

“Treatment of Craniocerebral Trauma”

House Staff, Maryland General Hospital, April, 1957:

“Accident room management of the acute head injury”

Dr. R. M. N. Crosby

East Baltimore Medical Society, September, 1956:

“Neurosurgery in Children”

Parents Group of the Searchlight School, Fall, 1956:

“Mental Retardation and Its Causes”

PTA School of the Chimes, January, 1957:

“Mental Retardation and Its Causes”

2 Radio and 2 Television programs in November, 1956 for the Maryland Society for
Mentally Retarded Children

Dr. William H. Mosberg, Jr.

(Springfield State Hospital, Sykesville, Md.—Staff Meetings)

- 1/25/57 Psychosurgery
- 2/ 8/57 Vascular lesions of the brain
- 2/15/57 Head Injuries
- 2/22/57 Spine Injuries
- 3/ 8/57 Herniated intervertebral disks
- 4/12/57 Brain tumors

(South Baltimore General Hospital—Surgical Staff)

- 2/ 5/57 Spine Injuries

(Maryland General Hospital—Surgical House Staff)

- 3/20/57 Spine Injuries
- 4/ 3/57 Head Injuries
- 4/24/57 Vascular lesions of the brain

(St. Agnes Hospital—Medical Staff Meeting)

- 3/27/57 Vascular lesions of the brain

(St. Agnes Hospital—Surgical Staff Meeting)

- 5/ 8/57 Vascular lesions of the brain

(St. Joseph’s Hospital—Surgical House Staff)

- 5/15/57 Surgical Management of Head Injuries

NEUROSURGERY

	Private	Clinical
<i>Cranial Surgery:</i>		
Craniotomy for tumor removal.....	37	10
Craniotomy, subdural membrane removal.....	6	22
Trephines, meningeal exploration.....	29	44
Trephines, evacuation brain abscess.....	2	4
Craniotomy, evacuation of abscess.....	0	1
Craniotomy, intracranial aneurysm ligation.....	6	4
Craniotomy for hemispherectomy.....	1	1
Trephines, prefrontal lobotomy.....	1	1
Craniectomy, cranial nerve section.....	7	0
Craniectomy for sequestectomy.....	0	1
Craniotomy for electrocorticogram.....	2	1
	<hr/> 91	<hr/> 89
<i>Vertebral Column and Spinal Cord Surgery:</i>		
Cervical laminectomy for Kahn procedure.....	2	0
Cervical interlaminar exploration for discectomy.....	15	2
Lumbar interlaminar exploration for discectomy.....	142	21
Lumbar laminectomy for discectomy.....	10	1
Laminar exploration for release of adhesions.....	3	0
Disc exploration and spinal fusion.....	4	1
Laminectomy for vertebral column tumor or disease.....	15	4
Laminectomy for spinal cord tumor.....	4	3
Laminectomy for tractotomy.....	7	4
	<hr/> 202	<hr/> 36
<i>Congenital Malformation Surgery:</i>		
Meningocele-myelomeningocele repair.....	2	1
Cranial osteotomy.....	0	0
Spinal shunts.....	0	0
Ventricular shunts.....	2	19
	<hr/> 4	<hr/> 20
<i>Traumatic Neurosurgery:</i>		
Application of Raney-Crutchfield tongs (O.R.).....	0	0
Craniectomy for subtemporal decompression.....	0	3
Craniectomy for therapeutic section of tentorium.....	0	4
Craniotomy for elevation of depressed skull fracture.....	9	9
Craniotomy for cranioplasty.....	5	2
Debridement and plasty of scalp lacerations.....	2	0
Debridement and decompression of spinal fracture.....	0	1
Laminectomy for removal of foreign body (cord).....	0	2
	<hr/> 16	<hr/> 21

NEUROSURGERY

(Concluded)

	Private	Clinical
<i>Peripheral Nerve Surgery</i>	4	2
<i>Neuro-Roentgen-Ray Diagnostics:</i>		
Trephines and ventriculogram	12	7
Ventriculography without trephines	3	5
Pneumoencephalography	68	47
Angiography (arteriogram)	44	26
Melography	192	33
Discography	0	0
Sinography	0	0
	<hr/> 319	<hr/> 118
<i>Miscellaneous:</i>		
Scalenotomy	1	0
Exploration lumbar sinus	1	0
Craniectomy, gunshot wound, skull	0	1
Lymph node biopsy	0	1
Excision hemangioma scalp	1	0
Skull biopsy	0	1
Craniectomy and debridement for postoperative wound infection	0	1
Excision intracranial tumor	1	0
Thoracolumbar sympathectomy	1	0
Excision anterior iliac spine	0	1
Removal tantalum plate	1	0
Excision tumor scalp	1	0
Excision bony cyst, parietal area	1	0
Incision and drainage, head wound	1	0
Incision and drainage of back	1	0
Excision of exostosis of skull	0	1
Osteotomy of sagittal suture	1	0
Frontal craniotomy for meningocele repair	1	0
Ligation common carotid, left	1	0
Needle biopsy, C5	1	0
Excision dermoid cyst, scalp	1	0
Closure cervical laminectomy dehiscence	1	0
	<hr/> 16	<hr/> 6
<i>Summary:</i>		
Operative procedures	333	174
Roentgen-Ray diagnostics	319	118
	<hr/> 652	<hr/> 292

OPERATIVE DEATHS—SURGICAL SPECIALTIES

CLINICAL SERVICE

Neurosurgery: 11

Hosp. No.	Initial	Primary Diagnosis	Operation	Cause of Death	Autopsy
101-8-79	W.L.	Subdural hematoma Cerebral contusion	Subtemporal decompression	Cerebral edema	Yes
099-7-86	B.H.	Subarachnoid hemorrhage Probable ruptured intracerebral aneurysm	Craniotomy Tentorial section	Cerebral edema	No
106-4-93	J.S.	Gunshot wound, head	Craniectomy, temporo frontal left	Cerebral lacerations and contusions	Med. Exam.
101-9-87	L.E.	Klippel-Feil syndrome Meningocele (Cervical, occipital)	Ventriculo ureteral shunt	Meningitis	No
108-6-81	A.S.	Cerebral contusion Cerebral concussion Multiple fractures, extremities	Bilateral trephines	Cardiac failure	Med. Exam.
107-9-76	C.F.	Cranio cerebral trauma Subdural hematoma	Subtemporal decompression and tentorial section	Cerebral edema	Med. Exam.
107-7-88	G.G.	Brain tumor suspect	Craniotomy	Encephalomalacia due to cerebral infarction	Yes
134-1-95	C.O.	Metastatic brain tumor	Trephine ventriculogram	Primary diagnosis	No
135-7-62	H.B.	Subdural hematoma	Bilateral subtemporal decompression	Cerebral edema	Med. Exam.
134-6-36	L.B.	Subdural hematoma chronic, right	Trephines, right Temporal craniectomy Tentorial section	Primary diagnosis	Med. Exam.
051-5-99	E.N.	Angioma, frontal right with hemorrhage	Craniotomy Excision of angioma	Brain abscess Meningitis	Yes

OPERATIVE DEATHS—SURGICAL SPECIALTIES

PRIVATE SERVICE

Neurosurgery: 18

Hosp. No.	Initial	Primary Diagnosis	Operation	Cause of Death	Autopsy
101-2-69	M.S.	Aneurysm, internal carotid artery	Ligation	Cerebral edema Cerebral softening	Yes
098-6-18	S.N.	Glioma, left frontal lobe	Craniotomy Biopsy	Primary diagnosis	Yes
101-3-05	H.L.	Glioma, left temporal lobe	Expl. craniotomy Evacuation gliomatous cyst	Cerebral edema	No
101-7-08	D.C.	Arnold Chiari mal formation	Craniectomy (cerebellar)	Cerebral edema Uncinate herniation	Yes
106-5-52	S.L.	Brain tumor suspect Encephalomalacia	Craniotomy (frontal parietal right)	Broncho pneumonia	No
096-6-34	W.A.	Brain tumor	Craniotomy	Cerebral edema	No
110-1-60	G.S.	Tumor of 3rd ventricle	Torkildeson procedure	Cerebral edema	No
108-7-79	J.T.	Encephalitis, chronic non specific	Trephine Aspiration Biopsy	Primary diagnosis	No
101-6-34	A.B.	Spongiblastoma multiforme Parieto occipital right	Craniotomy Biopsy	Primary diagnosis	Yes
136-0-33	S.S.	Meningioma sub tentorial, left	Laminectomy cervical Partial resection of tumor	Primary diagnosis	Yes
057-7-11	E.W.	Intracranial aneurysm, middle cerebral, right	Excision aneurysm	Aspiration exphxia Encephalomalacia	Yes
109-9-79	H.B.	Astrocytoma	Partial cranectomy	Primary diagnosis	No
134-1-18	O.C.	Glioma, tempero-occipital, right	Occipital lobectomy	Cerebral edema	Yes

OPERATIVE DEATHS—SURGICAL SPECIALTIES

PRIVATE SERVICE

Hosp. No.	Initial	Primary Diagnosis	Operation	Cause of Death	Autopsy
098-3-61	G.D.	Brain abscess, temporal	Trephine Aspiration of brain abscess	Primary diagnosis	No
109-7-62	F.K.	Cranio cerebral trauma with fractured skull depressed Multiple lacerations Hemorrhage	Subtemporal decompression Elevation of depressed fractures	Primary diagnosis	Yes Exam.
109-2-11	A.K.	Paravertebral abscess second- ary to metastatic carcinoma, clear cell, renal	Laminectomy Decompression of cord	Primary diagnosis Cardiac failure Lobar pneumonia	Yes
136-4-80	A.Z.	Intercranial aneurysm Middle cerebral ruptured	Craniotomy Clipping aneurysm	Cerebral edema	No
136-9-91	A.L.	Ruptured intracerebral aneurysm	Ligation of aneurysm under hypothermia Control cerebral blood flow	Primary diagnosis	No

NONOPERATIVE DEATHS

CLINICAL SERVICE

Neurosurgery: 1

Hosp. No.	Initial	Primary Diagnosis	Cause of Death	Autopsy
107-2-22	A.T.	Gunshot wound, brain Subdural hematoma	Primary diagnosis	Med. Exam.

NONOPERATIVE DEATHS

PRIVATE SERVICE

Neurosurgery: 6

Hosp. No.	Initial	Primary Diagnosis	Cause of Death	Autopsy
100-8-79	L.H.	Intercranial aneurysm, middle cerebral artery	Hemorrhage	Yes
056-0-51	W.H.	Metastatic carcinoma of the brain	Probable congestive failure	No
074-3-52	J.L.	Astrocytoma Diencephalon	Primary diagnosis Cerebral edema	Yes
108-4-08	B.M.	Gunshot wound of the brain	Primary diagnosis	Med. Exam.
134-9-62	P.M.	Ruptured intracerebral aneurysm	Primary diagnosis	No
107-0-47	C.H.	Carcinoma of the lung Metastasis to thoracic spine Paraplegia	Carcinomatosis	No

THORACIC SURGERY

The division of thoracic surgery has undergone a variety of changes in the more than one and one-half years since the appointment of Dr. R. A. Cowley as its head. In that time a large and ever increasing importance is being given to cardiac and cardiovascular surgery. Most of this work is concentrated in the research laboratory and on the surgical wards at University Hospital. Increasing importance is being given to our thinking with regard to this surgical specialty at Mercy Hospital where emphasis upon non-tuberculous pulmonary and esophageal disease can be concentrated. Finally, in September, 1956, a surgical tuberculosis floor was opened at the Mount Wilson Sanatorium in Baltimore where experience in the treatment of tuberculosis is concentrated.

A two-year residency program is given qualified candidates who wish to become proficient in the field of thoracic surgery. This program is under the direction and supervision of two full-time physicians, Dr. R. A. Cowley and Dr. Bruce Armstrong at University Hospital and two part-time physicians, Dr. William Garlick at Mercy Hospital and Dr. John Miller at Mount Wilson Sanatorium. Work in the Research Laboratory at the University is under the direction of Drs. Cowley and Armstrong, and Dr. William Esmond on a part-time basis.

This division, too, is sharply handicapped by lack of patient bed space. Such patients as are admitted to this service require often a detailed and sometimes tedious preoperative period of diagnostic investigation. Thus, a bed capacity capable of handling 12-15 patients would more nearly approach this division's needs than do the 4-6 now available. A partial, but wholly unsatisfactory, solution of this need has been the availability of beds on the medical floors for the use of cardiac patients undergoing diagnostic work-up or undergoing surgical care and treatment. This arrangement has provided excellent care from the combined surgical and medical staffs for these patients.

but has placed an undesirable burden upon these floors that do not easily accommodate patients who require surgical treatment, dressings, etc. Fortunately, a minimum of friction has developed over the limits of responsibility of the two staffs.

Further difficulties have developed, from time to time, at Mercy Hospital. The slow development of a thoracic surgery ward service can be attributed in large measure to a lack of industry, a minimum of availability and a misinterpretation of the functions of residents sent to this hospital for thoracic surgical training. In general, there appears to be little intermingling of men in the two disciplines and therefore little concern and appreciation each of the other. Perhaps the severest limitation is the lack of assigned beds for thoracic surgery—the result, as was anticipated, has been some acrimonious bickering between house officers. Until such allocation can be agreed upon, little hope of improving this service seems to be possible.

The clinical facilities at Mount Wilson are hampered little or not at all by the availability of beds. On the other hand the surgical nursing staff has been torn by internal quarreling and dissatisfaction which has sharply limited its efficiency and effectiveness and has gained for the University nursing group little commendation for a job reasonably well done. Some limitation of funds has curtailed frequent anesthesia staff coverage, so that operations are done on two week days only. It is anticipated that this coverage can be increased in the coming year.

The teaching activities in the medical school of this division are limited largely to the senior year when one-fourth of this class is assigned to it for a period of four weeks. A series of lectures comprises its teaching in the junior year.

A series of lectures to nurses is given at frequent intervals during the year for a small group of nurses wishing to specialize in thoracic surgical nursing.

Within this division and with the assistance of Dr. Bruce Armstrong, cardio-pulmonary function laboratories have been set up and are functioning at the University Hospital, Mercy Hospital and Mount Wilson Sanatorium. In each of these areas an improvement and increased availability of equipment and apparatus is gradually becoming apparent. Shortly an additional space within University Hospital will be devoted solely to detailed pulmonary function studies.

* * *

RESIDENT STAFF

Resident

Dr. Santiago Lombano

Assistant Residents

Dr. Paul M. DiGiorgi

Dr. Toufic E. Haddad

Dr. Charles G. Peagler

LECTURES AND COMMUNITY SERVICES

Dr. R. A. Cowley

1. "Selective Vagotomy in Coronary Vascular Disease"; Cologne, Germany; August 20, 1956
2. "Vascular Surgery"; St. Agnes Hospital, Baltimore, Maryland; September 2, 1956

3. "Surgery for the Cardiac Patient"; Delaware Academy of General Practice, Wilmington, Delaware; September 26, 1956
4. "Pulmonary Evaluation"; Delaware Academy of General Practice, Wilmington, Delaware; September 26, 1956
5. "Cardiac Surgery"; Maryland Academy of General Practice, Belvedere Hotel, Baltimore, Maryland; October 18, 1956
6. "Surgery for Mitral Stenosis"; Maryland Chapter Vocational Rehabilitation, Emerson Hotel, Baltimore, Maryland; October 23, 1956
7. "Surgery for Coronary Insufficiency"; Doctors Hospital Post-Graduate Institute, Baltimore, Maryland; November 13, 1956
8. "Surgical Aspects—You and Your Heart"; Macht Assembly Hall, Baltimore, Maryland; December 12, 1956
9. "Heart Surgery"; WAAM-TV, Baltimore, Maryland; February 14, 1957
10. "Occlusive Vascular Disease of the Great Vessels"; South Baltimore General Hospital, Baltimore, Maryland; February 24, 1957
11. "Current Aspects of Heart-Lung Apparatus in Cardio-Pulmonary Surgery"; Provident Hospital, Baltimore, Maryland; April 25, 1957

RESEARCH PROJECTS AND INVESTIGATIONS

1. Blood Oxygenator Dialysis Device, Grant No. H-2618, U. S. Public Health Service. Dr. William Esmond
2. Origin and Effect of Ammonia in Shock, Army Contract No. DA-49-007-MD-674. Dr. R. A. Cowley
3. A Study of the Metabolic Requirements of Cardiac Tissues under Certain Neurogenic and Metabolic Stress States and Developing and Perfecting a Mechanical Metabolic Exchange Apparatus, Army Contract No. DA-49-007-MD-737. Dr. William Esmond
4. A Study of the Metabolic Requirements of Tissues under Varying Conditions, Army Contract No. DA-49-007-MD-654. Dr. R. A. Cowley
5. Perfection of Bubble Type Oxygenator. Bressler Reserve Fund. Dr. R. A. Cowley
6. Effect of Vagal Stimulation on the Coronary Arteries. Drs. R. A. Cowley and L. Scherlis
7. Origin and Utilization of Ammonia during Hypothermia for Cardiac Surgery. Dr. R. A. Cowley
8. Relationship in Time between Symptomology, Diagnosis and Treatment in Reference to Cancer of the Lung. Drs. R. A. Cowley and T. Haddad
9. Effect of Antibiotics on the Survival of Dogs in Acute Coronary Occlusion. Dr. R. A. Cowley

PAPERS PUBLISHED

1. ALLEN, J. M. and COWLEY, R. A.: A new vascular instrument for repair of saccular aneurysms, Bulletin of School of Medicine, University of Maryland, 41: No. 3, (July) 1956.
2. SCHMERT, G.: A simple type of bubble oxygenator, Surgery, (December) 1956.
3. SCHMERT, G. and COWLEY, R. A.: Defibrillation, cardiac arrest, and resuscitation in deep hypothermia by electrolyte solutions, Surgery, (February) 1957.

PAPER SUBMITTED

1. COWLEY, R. and SCHIERLIS, S.: Selective vagotomy in the treatment of coronary artery disease, submitted for publication in Diseases of the Chest.

THORACIC SURGERY

	Private	Clinical
<i>Lung and Pleura:</i>		
Pleural biopsy	2	4
Lung biopsy	5	10
Lung abscess drainage	0	3
Lobectomy	10	66
Lobes plus segmentals	0	21
Segmentals	1	47
Pneumonectomy	5	22
Wedge resection	3	4
Decortication	3	2
	<hr/> 29	<hr/> 179
<i>Thorax:</i>		
Funnel chest repair	3	2
Rib biopsy	0	2
Stab and gunshot wounds	0	11
Empyema drainage	2	10
Excision sinus tract	0	1
Cervical rib	1	0
Pericardial biopsy	0	2
Hiatus hernia	5	2
Thoracoplasty (initial)	0	17
Thoracoplasty (concomitant)	1	10
	<hr/> 12	<hr/> 57
<i>Cardio-Vascular:</i>		
Aortic valvulotomy	3	0
Chanelization abnormal		
Pulmonary vein	1	0
Patent ductus	2	4
Mitral commissurotomy	15	2
Pulmonic valvulotomy (isolated)	4	5
Pulmonic valvulotomy (combined)	4	3
Aortic coarctation	3	1
Interatrial defect (isolated)	6	3
Interatrial defect (combined)	4	1
Tetralogy	2	0
Pericardiopexy (Beck 1)	3	1
Selective vagotomy plus Beck 1	7	1
Internal Mammary Artery Ligation	1	0
Vascular ring	1	1
Superior vena caval syndrome	1	0
Femoral A.V. fistula	1	0
Femoral acute-acute	1	0

THORACIC SURGERY

(Continued)

	Private	Clinical
Aortic aneurysms graft.....	3	0
Adrenalectomy and sympathectomy (bilateral).....	2	1
	<u>64</u>	<u>23</u>
<i>Esophagus:</i>		
Esophagogastrectomy	3	5
Colon transplant	0	3
Ligation varices	0	1
Foreign body removal.....	1	1
Diverticulum	2	0
Esophagoscopy	4	28
Vagotomy	1	0
	<u>11</u>	<u>38</u>
<i>Mediastinum:</i>		
Drainage	1	4
Removal cyst or tumor.....	2	2
	<u>3</u>	<u>6</u>

OPERATIVE DEATHS—SURGICAL SPECIALTIES

CLINICAL SERVICE

Thoracic Surgery: 5

Hosp. No.	Initial	Primary Diagnosis	Operation	Cause of Death	Autopsy
101-3-43	H.S.	Squamous carcinoma of the esophagus	Esophagogastrostomy	Mediastinitis	No
101-5-79	H.R.	Carcinoma of the left lung	Thoracotomy Biopsy	Primary diagnosis	Yes
116-5-79	C.P.	Squamous cell carcinoma, middle 3rd of esophagus	Resection Reconstruction of esophagus with right colon	Mediastinitis secondary to perforation, esophagocolic junction	Yes
109-7-61	M.B.	Lannace's cirrhosis Bleeding esophageal varices	Trans thoracic ligation of esophageal varices	Mediastinitis	Yes
108-2-69	C.B.	Pulmonary abscess right lower lobe	Right lower lobe lobectomy	Septicemia Perforation of the esophagus Mediastinitis	Yes

OPERATIVE DEATHS—SURGICAL SPECIALTIES

PRIVATE SERVICE

Thoracic Surgery: 3

Hosp. No.	Initial	Primary Diagnosis	Operation	Cause of Death	Autopsy
099-6-56	J.M.	Carcinoma of the lung, right	Right pneumonectomy	Spontaneous pneumothorax, left	Yes
108-5-64	A.T.	Aneurysm, abdominal aorta	Excision aneurysm Bifercation Graft	Atelectasis, right massive	No
080-1-58	J.K.	Congenital heart disease A.V. communis Infundibular stenosis Double superior vene cava	Right ventriculotomy Repair of I.V. septal defect Repair infundibular stenosis	Electrolyte imbalance	Yes

NONOPERATIVE DEATHS

CLINICAL SERVICE

Thoracic Surgery: 2

Hosp. No.	Initial	Primary Diagnosis	Cause of Death	Autopsy
134-9-71	R.R.	Coronary insufficiency	Primary diagnosis	Yes
095-8-35	W.K.	Carcinoma of the esophagus with perforation Secondary lung abscess	Primary diagnosis	No

NONOPERATIVE DEATHS

PRIVATE SERVICE

Thoracic Surgery: 2

Hosp. No.	Initial	Primary Diagnosis	Cause of Death	Autopsy
134-3-36	F.T.	Pulmonic stenosis Interventricular septal defect	Convulsive seizure Post cardiac catheterization	Yes
135-4-96	A.U.	Carcinoma of the right lung	Cerebral metastasis	No

OTOLARYNGOLOGY

The division of otolaryngology has begun already to change under its new leadership. Joining the Department of Surgery in mid-April, Dr. Cyrus L. Blanchard became a full-time member of the staff and head of this division. Dr. Blanchard was born in Massachusetts, received his college degree at Clark University in Worcester and his M.D. degree from the George Washington University in Washington, D. C. His training in otolaryngology was begun at the Memorial Hospital in Worcester, Massachusetts, was continued through the period of his Army service at the Audiology and Speech Correction Center, Walter Reed General Hospital and was completed at the University of Michigan, in Ann Arbor, in 1953. Just prior to coming to Maryland, Dr. Blanchard was an assistant in surgery, in the Department of Otolaryngology, at the School of Medicine, University of Southern California.

With the advent of a full-time head of this division it is unquestioned that many of the present worrisome problems can be ironed out or made unimportant by his constant attention and industry.

One of the grave defects existing at the moment within this division is its lack of physical facilities necessary for the full realization of its capacity. Through the very generous support of the Women's Board of the University Hospital sufficient funds were made available to this division for the purchase and installation of an audiometric testing room in the Looper Clinic. This, with supplementary sound-proofing of the area will admit an almost ideal unit for hearing testing and acuity evaluations and can be made of sufficient accuracy by minimal additional sound-proofing that it will permit considerable basic clinical research to be done upon hearing.

When this area has been put into use, further revision of the Otolaryngology Clinic in the out-patient building must be begun. It is hoped that:

- (1) The present otolaryngology clinic and the now unused ophthalmology clinic area can be combined.
- (2) Both areas may be renovated to admit not only clinic, but *also* private patients for examination, because:
- (3) By this means only, practical, efficient and effective use may be made of part-time associates in the division.
- (4) Means will be made available for the installment of one or two audiometric testing units in this area.
- (5) Because of the immediate and close alignment of speech and hearing defects, a part-time audiologist can be assigned to this division from the Department of Speech at College Park.
- (6) Additional equipment can be made available for the out-patient area.

An early step towards the utilization, to the fullest of the out-patient potential, is the increased clinic time; as of July 1, this unit will be open a full four half-days per week, instead of three. It is anticipated that shortly, thereafter, it will be opened daily.

The logical sequence of an increasing diagnostic load will be a longer and larger number of patients who require hospitalization for surgical therapy. It seems inconceivable that this division exists at the moment on four adult ward surgical beds and

an occasional child's bed, wrung from a vehemently protesting general surgery resident. Some provisions *must* be made for additional beds for resident staff training, for teaching and for patient care.

It is apparent that with this anticipated availability of diagnostic and treatment facilities in both the out-patient building and in the Looper Clinic within the hospital, plus a hoped-for addition of patient beds, this division may offer a superb clinical training for its house officers. In the several years preceding this an otolaryngology resident staff was not available. The present resident joined the division on November 1, 1956, coming to this hospital after uncompleted work in otolaryngology with the Armed Services. With the beginning of this resident has come the setting-up of a responsible and more or less capable system from which point it is now anticipated additional men can be added to begin their three years of clinical otolaryngologic training. Into such a fully organized program can then be added lecture and laboratory courses in anatomy and pathology of the normal and diseased ear, the physiology of the ear and the effect of drugs upon the normal and diseased ear.

Perhaps the gravest concern over this division by other members of the Department of Surgery has related to student teaching. A good effort has been made by the men in the division, but upon a part-time basis. This program did not permit a constancy or closeness of contact and supervision sufficient to make the service attractive or appealing. Perhaps the gravest impressive defect upon senior medical student ward rounds was the great lack of clinical material. This lack required a return to didactic lecturing, of which these critical novices had had more than enough in their preceding medical school years. With the projected expansion in clinical diagnostic facilities and the undertaking of a graded residency training program, much of the teaching of junior and senior students can be directed towards an improved knowledge and awareness of otologic diagnosis. The value of such knowledge can be experienced only by bedside patient contact and it is here again that strenuous planning must be undertaken.

GIFTS AND DONATIONS

Women's Auxiliary Board of the University Hospital—\$5,667.00, for the purchase of Audiometric Testing Equipment.

RESEARCH

At this moment no organized research program is in being. Planning for such may take several directions and discussions are underway at this moment to determine whether this shall be of a basic nature or established at the level of clinical detection, evaluation and rehabilitation.

* * *

RESIDENT STAFF

Resident

Dr. Gene Trettin

OTOLARYNGOLOGY

	Private	Clinical
<i>External Ear:</i>		
Malignant tumors-excision	0	1
<i>Mastoidectomy:</i>		
Simple	3	0
Radical	5	1
	8	1
<i>Intranasal Operations:</i>		
Submucous resection of septum.....	2	0
Removal of nasal polyps.....	1	0
Antrotomy	4	1
	7	1
<i>External Sinus Operations:</i>		
Antrum—radical	1	0
<i>Definitive Operations for Malignant Tumors:</i>		
Oral cavity	1	0
Mandible and adjacent structures.....	1	1
Superior maxilla	0	1
	2	2
<i>Tonsillectomy and Adenoidectomy:</i>		
Tonsillectomy and adenoidectomy—children.....	90	90
Tonsillectomy—adults	5	2
Hare Lip—plastic repair.....	0	1
Adenoidectomy—adults	5	0
	100	93
<i>Laryngeal Operations:</i>		
Laryngoscopy—definitive removal of benign tumor or nodule	97	25
Total laryngectomy	5	1
	102	26
Tracheotomy	2	1
Bronchoscopy—diagnostic or therapeutic.....	155	47
Esophagoscopy—diagnostic or therapeutic.....	97	4
	254	52

SUMMARY

It is to be noted that in the discursive account of the Department of Surgery for the past twelve months, some needs and trends are common and reiterated for each division within the department. Some of the trends are of necessity and are not necessarily representative of an ideal directional concept. Perhaps the most important concept implied is that this department will flourish most abundantly when the teaching of house officers and students can, for the most part, be accommodated in one area—the University Hospital and the School of Medicine of the University of Maryland. The utilization of other institutions within the City of Baltimore for the accomplishment of the teaching and training requirements of the School of Medicine, except where sharply specialized disciplines are concentrated, is a makeshift and undesirable digression and must be so acknowledged.

PATIENTS' BEDS

To so acknowledge the present trend is to point up the extreme need for hospital beds. It must be explained further that clinical material on a surgical ward differs radically from that on any non-surgical floor. The postoperative patient is no longer suitable for a wide latitude in the teaching of physical diagnosis, the demonstration of typical gross anatomico-pathologic findings or for the day-to-day observation of changes resulting from the administration of medical supportive and corrective measures. Surgical treatment results frequently in dramatic changes in the course of a patient's disease process and a full realization of these changes must be predicated upon beforehand patient observation. This requirement might be described best by stating that the teaching value of a patient is "used up" more readily and consistently than under a non-surgical discipline. Therefore, to fulfill the teaching and training requirements of this department, a larger patient load must be attained.

RESIDENT STAFF

It is felt, generally, that maximum teaching and training benefit, for both student and house officer, is reached when a suitable interval is devoted solely to the study of each group of patients allocated to a special discipline. Thus, each house officer and each student, ideally, will spend a specific amount of time on each of the several surgical divisions, devoting his attention completely to the study of patients whose disease is peculiar to this specialty. Such a requirement demands not only a goodly patient load in this specialty, but a sufficient staff of housemen to make such a rotation practicable and continuous.

OUT-PATIENT DEPARTMENT

Improvement and progress within the out-patient area has been good. There still exists a large deficiency in the effectiveness and efficiency of many service areas such as roentgenology, laboratory, record room, and similar units. In general, the clinical facilities are much improved and an increased patient load is some expression of this improvement. It is anticipated and hoped that in the near future daily acceptance of patients can be made in all surgical clinic areas. The maximal efficiency of many areas, and the availability of many others likely will never be achieved until a new physical plant can be built.

RESEARCH

There is certainly no great complacency and little pride of achievement in the progress made to date in the surgical research area. Little has actually been accomplished—much is planned and progress is being made. Already, however, considerable concern is held over space limitation. Despite the fact that the surgical floor is least in size, it is required that two units be given over, one to microbiology and another to pediatrics. Already considerable resentment and friction has developed because of this situation. Surely a better and more agreeable solution can be advanced in the coming months. The addition of further projects and thus a greater load in this area will shortly demand some expansion in this unit.

NON-PATIENT SPACE

This department is severely restricted in non-patient space. Already several members within the department have indicated their awareness that their productivity is to some degree curtailed by a lack of office and study space within the University Hospital. This is a most troublesome situation. These individuals carry a good clinical load and much influence over students and house officers. Their visible industry in such endeavors as clinical research, undertaken and pursued within this hospital, will have considerable influence upon student and house officer attitudes and inclinations in this same direction.

* * *

Finally, this department recognizes the sincere efforts now being made to accomplish the goals and ideals set forth above. It is duly appreciative of these efforts.

UNIVERSITY HOSPITAL
ADMISSIONS AND PATIENT DAYS

Fiscal Year 1956-1957

	Admissions	Patient Days
General Surgery	3,272	36,844
Neurosurgery	866	15,915
Orthopedics	252	3,897
Thoracic Surgery	168	2,740
Urology	821	9,906
Ear, Nose, Throat.....	134	542
Ophthalmology	21	134
Oral Surgery	27	150
Proctology	3	15
Plastic Surgery	14	142
*Medicine	3,576	56,267
Psychiatry	445	19,600
Pediatrics	742	12,802
Newborn	3,531	17,632
Obstetrics	3,896	15,437
Gynecology	1,260	8,637
	<u>19,028</u>	<u>200,660</u>

* Includes Neurology, Dermatology, Infectious Diseases, Hematology.

UNIVERSITY HOSPITAL
Baltimore 1, Maryland

SURGICAL OPERATIONS

Fiscal Year 1956-57

July	585
August	626
September	516
October	560
November	564
December	430
January	566
February	514
March	562
April	563
May	562
June	482
TOTAL OPERATIONS....	<u>6,530</u>
TOTAL LIVE BIRTHS.....	3,653
TOTAL AUTOPSIES	391
AUTOPSY PERCENTAGE	48.8%

UNIVERSITY HOSPITAL
OUT-PATIENT DEPARTMENT

Department		Total patient visits for fiscal year 1956-1957
<i>Medicine</i>		
General	13,347	
Allergy	3,703	
Arthritis	1,009	
Cardiology	1,302	
Chest	818	
Dermatology	7,798	
Dept. "S"	2,068	
Diabetic	1,770	
Endocrinology	266	
Hematology	653	
Gastro-Intestinal	719	
Hypertensive	203	
Isotope	557	
Neurology	1,317	
Demyelinating	21	
TOTAL—Medicine		35,551
<i>Obstetrics</i>	16,393	
TOTAL—Obstetrics		16,393
<i>Gynecology</i>		
General	7,864	
Oncology	895	
TOTAL—Gynecology		8,759
<i>Pediatrics</i>		
General	15,701	
Pediatric-Cardiology	513	
Pediatric-Chest	127	
Pediatric-Hematology	12	
Pediatric-Seizure	793	
TOTAL—Pediatrics		17,146
<i>Surgery</i>		
General	14,292	
ENT	1,478	
Genito-Urinary	3,521	
Neuro-Surgery	767	
Orthopedics	3,476	
TOTAL—Surgery		23,534
<i>Dental</i>	3,706	
TOTAL—Dental		3,706

Department	Total patient visits for fiscal year 1956-1957	
<i>Child Guidance</i>	1,389	
TOTAL—Child Guidance		1,389
<i>Medical Comprehensive</i>	1,483	
TOTAL—Medical Comprehensive		1,483
<i>Physical Therapy</i>	5,108	
TOTAL—Physical Therapy		5,108
Home Visits	559	559
Psychiatry	7,036	7,036
Psychiatry Child Guidance.....	2,286	2,286
Well Baby Clinic.....	5,444	5,444
GRAND TOTAL		128,394
Laboratory Examinations		68,643
X-Ray Examinations		11,424
Clinic visits by race—		
Colored		105,363
White		23,031

UNIVERSITY HOSPITAL

Baltimore 1, Maryland

OUT-PATIENT DEPARTMENT CLINIC VISITS

Fiscal Year 1956-57

	New	Revisits	Referrals
July	1,692	8,287	675
August	1,762	8,928	576
September	1,384	7,467	358
October	1,822	9,255	614
November	1,630	8,828	584
December	1,260	7,357	422
January	1,705	8,597	588
February	1,439	8,359	611
March	1,668	9,144	650
April	1,512	9,432	624
May	1,632	9,079	749
June	1,329	7,867	508
TOTAL	18,835	102,600	6,959

GRAND TOTAL 128,394

UNIVERSITY HOSPITAL EMERGENCY ROOM

Total patients treated 37,240

UNIVERSITY HOSPITAL
INTERNS AND RESIDENTS

Fiscal Year 1956-57

Department	Total
Intern—Rotating	23
Intern—Medicine	5
Intern—Pediatrics	3
Intern—Dental	3
Anesthesia	8
Dental	1
Medicine	22
Obstetrics-Gynecology	14
Pediatrics	8
Psychiatry	18
Radiology	7
Surgery	35
TOTAL	147*

* The above total includes Fellows, and members of the House Staff paid from Departmental Restricted Funds, or other Funds.

UNIVERSITY HOSPITAL
Baltimore 1, Maryland

VOLUNTEER SERVICES

Fiscal Year 1956-57

Volunteers	Hours Contributed	Service
<i>Red Cross Production Workers</i>	3,892	278,318 Surgical Dressings 860 O.R. and Delivery Caps
<i>Red Cross—Nurse's Aides</i>	5,089	Patient care on Wards
<i>Women's Auxiliary Board Volunteers</i>	6,646	Information Desk, Out-Patient Department, Patient's Library, etc.
<i>High School Student Volunteers</i>	718	Patient care on Wards
Total Hours Contributed	16,345	

UNIVERSITY HOSPITAL
OFFICE OF THE DIRECTOR
Baltimore 1, Maryland

GIFTS AND CONTRIBUTIONS RECEIVED FROM JULY 1, 1956 TO JUNE 30, 1957

Name of Donor or Sponsor	Description of Gift	Value	Purpose
Glenn L. Martin	Bequest	\$90,000	Expansion of Operating Rooms, Delivery Rooms, X-Ray facilities
	Bequest	10,000	Pincoff's Fellowship Fund
Women's Auxiliary Board University Hospital	Anesthesia Equipment	5,640	Improvement of Anesthesiology Dept.
	Electroencephalography Equipment	7,870	Improvement of EEG Laboratory
	Orthopedic Equipment	2,600	Improvement of Orthopedic Division
	Audiometric Equipment	5,667	Provide an Audiometric Testing Room
	Christmas trees and decoration	200	For use in patient areas
	Contribution	600	For patient care in Out-Patient Dept.
Koester Bakery Company The A. Jay Fink Foundation Mrs. Margaret F. Dunnock C. E. Stevens Brothers, Inc. American Brake Shoe Foundation National Brewery Company Lapides Foundation, Inc. Maryland Tuberculosis Assn.	Easter tray favors		For use in patient areas
	Contribution	150	For use in patient areas
	Contribution	100	For use in patient areas
	Contribution	100	For use in Pediatrics
	Contribution	700	Oxygen tent
	Contribution	100	For use in patient areas
	Contribution to Hoffberger Fund	4,000	For use in EEG Laboratory
	Contribution	100	Glasses, artificial limbs for patients
	Contribution to Maryland Tuberculosis X-Ray Fund	190	Chest X-Ray Screening Service
	Bequest	1,000	For use in patient areas
Ella Mackubin Legacy			

UNIVERSITY HOSPITAL

Fiscal Year 1956-57

COST PER PATIENT DAY

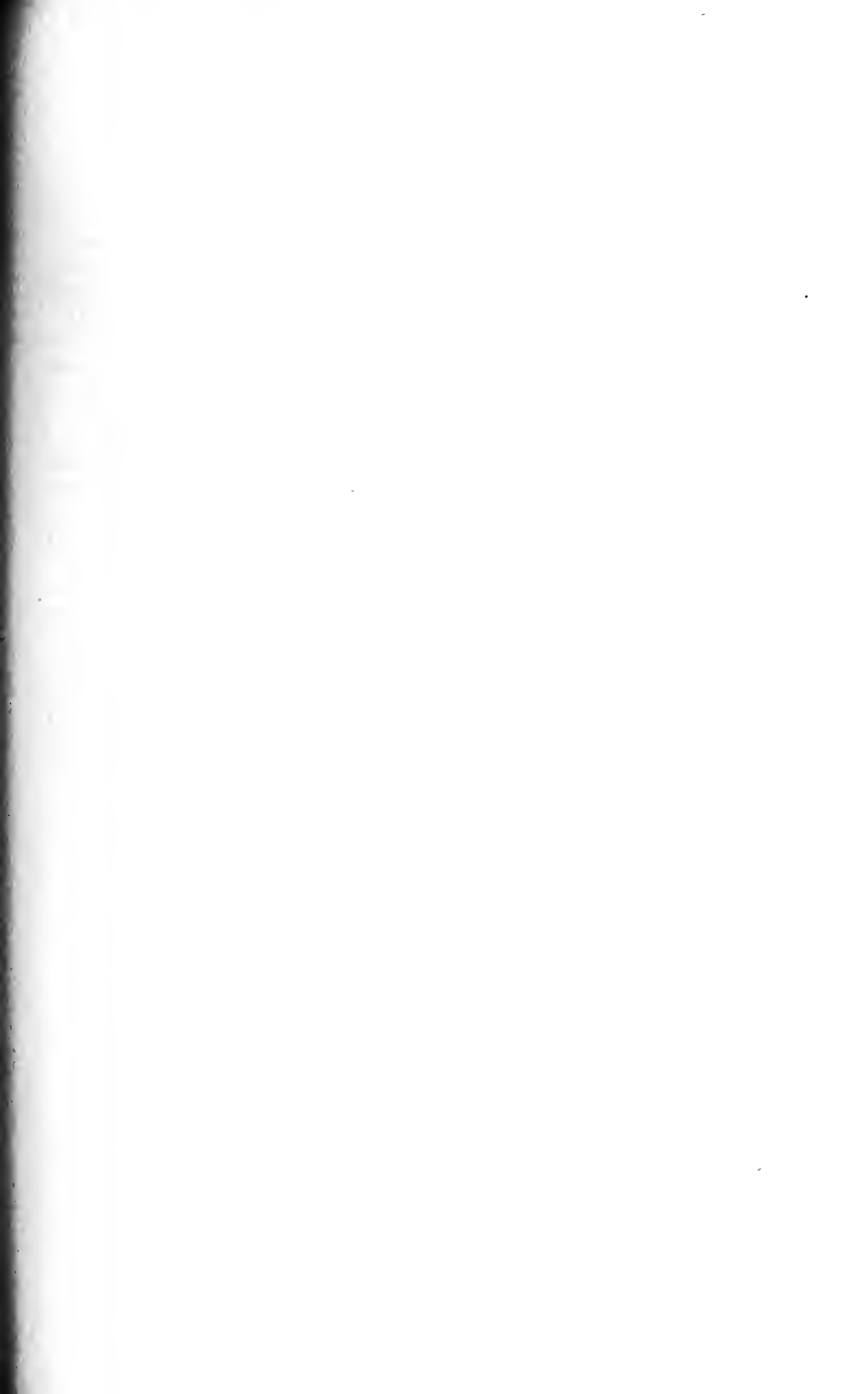
The following information derived from

"Hospital Statements of Reimbursable Costs" submitted to the Maryland Hospital Service (Blue Cross).

Period July 1, 1956 through June 30, 1957

*Adjusted In-Patient Days	214,483
Total Operating Expenses	\$6,302,357.33
Operating Expenses including Depreciation	\$6,680,498.77
Blue Cross Per Diem Cost	\$31.15

* Weighed by Out-Patient visits—5 visits equal 1 patient day.



MEDICAL SCHOOL SECTION

STUDENT ORIENTATION PROGRAM SUCCESSFUL

Largely because of the efforts of the Dean's office and the Student Government Association of the School of Medicine, an Orientation Program for new students was introduced at the beginning of the Sesquicentennial Year.

The program opened on Monday, September 17 with an address by Mr. Howard Siegel, Chairman of the Student Orientation Committee. A welcome was given by Dean Stone. Addresses by Drs. Louis Krause and Robert Parker concerning the future of the student in medicine and the medical school curriculum were then given. Dr. Dietrich C. Smith discussed the organization of the University.

In order, the following Medical School Organizations were then presented: Library, Student Health Service, Alpha Omega Alpha, Student Government Association, Student American Medical Association, Interfraternity Council, Newman Club, Christian Medical Association and the year book, Terra Mariae Medicus. Later in the day students were addressed by Drs. Maurice Pincoffs and John C. Krantz, Jr.

On Tuesday there were additional lectures and demonstrations designed to further orient the students. A tour of the medical school was also conducted and followed by a luncheon sponsored by the Medical Alumni Association held in the Terrace Room of the Psychiatric Institute.

On Wednesday additional addresses designed to further orient the students, were given by Drs. Pincoffs and Woodward. At this time various instrument companies, particularly purveyors of microscopes demonstrated their instruments.

At 2 P.M. a convocation was held for all students and faculty in the Westminster Presbyterian Church, Greene and Fayette Streets.

The program was opened by Dean Stone who presented the distinguished guests and members of the Board of Regents. Dr. Wilson H. Elkins, President of the University, gave the opening address which was followed by a brief yet forceful address by His Excellency, The Governor of the State of Maryland, Theodore R. McKeldin (see below).

The convocation exercises were concluded with a tea and reception sponsored by the Women's Board of the University Hospital and held in the 104th Medical Battalion Armory adjacent to Westminster Church.

The convocation marking the beginning of the Sesquicentennial Year is planned as an annual feature of the orientation program marking the beginning of each school year.

ADDRESS BY GOVERNOR THEODORE R. McKELDIN

The urge to advance the sciences of medicine and surgery grows naturally with the progress of civilization. The earliest prehistoric men, we are led to believe, lived in constant suspicion of each other. Medicine was unknown, and the best known surgery for the prolonging of life was the skillful application of a crude club on the skull of an intruding neighbor. It was only when tribes at last were formed for com-

panionship and mutual protection that the life of one man became important to another.

Today we scoff at the dubious arts of the witch doctor, but although we know his wizardry effected no true cures, we must at least give him credit for being an important factor in the awakening within the people realization of the need for some effort to cure sickness and prevent the spread of disease. Somewhere along the line, a witch doctor with more intelligence than his fellow practitioners discovered the curing or alleviating powers in some woodland herb or group of herbs and proclaimed this new knowledge a part of his magic. Others went along with the trend and medicine was on its way.

It was a long way from those primitive eons to this day—and a long way still stretches ahead. I believe that today, despite the continuing threats of war and the development of weapons of wholesale destruction, civilization is approaching a new plateau in its long march forward. It is significant that the heads of nations of most bitter rivalry are more willing to sit in conference with each other. It is significant that international upheavals, which once would have brought quick resort to arms, now are accompanied by no blasting guns or bursting bombs. There is great significance, too, in the fact that once the power of the atom was clearly defined in its death-dealing blow over Japan, it was the men and women of the medical sciences who moved with the greatest alacrity to apply this power—not to the dealing of death—but to the prolonging of life—not just for friendly countries, but for all mankind.

Yes, we have come a long way in medicine and surgery—a long way in the prevention of disease and the curing of human ills. I feel that we have come a long way too toward that goal of human brotherhood—the best in civilization. And, yes, there is a long way yet to go—but we are on our way, and among the leaders now, as always, are the physicians and surgeons, and the nurses and druggists, and all who are allied with them in the arts of human betterment.

I greet you with real pleasure on this anniversary opening of your school year—not as just another group of much needed future physicians and surgeons—but as leaders in the steady march toward that brighter, distant day when ancient hatreds will be banished from the hearts of men and the real value of the human family will be recognized universally as it historically has been recognized in the credo of medicine.

DR. SPENCER NAMED EMERITUS PROFESSOR

Upon nomination of the faculty and by confirmation of the Board of Regents of the University, Dr. Hugh R. Spencer who retired as Professor of Pathology in the School of Medicine, was recently named Emeritus Professor of Pathology.

SCHEDULE FOR "MAN AND HIS ENVIRONMENT" COURSE SET FOR REMAINDER OF YEAR

The following schedule includes the speakers for the orientation course "Man and His Environment" beginning with the February 2nd lecture and continuing through April 13. The last three lectures have not been assigned at the time the Bulletin goes to press.

CHEMICAL HALL, SATURDAYS, 9:00-11:00 A. M.

- February 2 Medicine in Pre-History and Primitive Peoples
Speaker: Richard H. Shryock, The William H. Welch Professor of the History of Medicine, Johns Hopkins University.
- February 9 Medicine of the People of Israel
Speaker: Louis A. M. Krause, Professor of Clinical Medicine, University of Maryland.
- February 16 Greco-Roman Medicine
Speaker: Raymond M. Burgison, Assistant Professor of Pharmacology, University of Maryland.
- February 23 Arabian Medicine
Speaker: Louis A. M. Krause, Professor of Clinical Medicine, University of Maryland.
- March 2 Renaissance Medicine
Speaker: Louis A. M. Krause, Professor of Clinical Medicine, University of Maryland.
- March 9 Patterns in Disease
Speakers: Theodore E. Woodward, Professor of Medicine and Head, Department of Medicine, University of Maryland.
 Ephraim T. Lisansky, Associate Professor of Medicine, Associate in Psychiatry, University of Maryland.
- March 16 Patterns in Disease
Speakers: Doctors Woodward and Lisansky.
- March 23 Population Pressures
Speaker: Robert Carter Cook, Professorial Lecturer in Medicinal Genetics, George Washington University School of Medicine. Lecturer in Biology, George Washington University. Director, Population Reference Bureau and Associate of Research in Human Heredity, Washington D. C.
- March 30 Aging Population
Speaker: Nathan W. Shock, Chief, Section on Gerontology, Baltimore City Hospitals (USPHS).
- April 6 Philosophy of Science
Speaker: Thelma Z. Lavine, Assistant Professor in Philosophy, University of Maryland.
- April 13 Juvenile Delinquency
Speaker: Peter P. Lejins, Professor of Sociology, University of Maryland.

PROFESSOR FIGGE NAMED AMERICAN CANCER SOCIETY HEAD

Dr. Frank H. J. Figge, Professor of Anatomy, has been recently elected President of the Maryland Division of the American Cancer Society. Dr. Figge, who has for many years served as Vice-President of the Maryland Division, was elected to succeed Dr. C. Bernard Brack, who became Chairman of the Board.

DR. GOLDSTEIN RESIGNS PATHOLOGY POST

Dr. Albert E. Goldstein, for many years Assistant Professor of Pathology in the School of Medicine and active in the teaching of genito-urinary pathology, tendered his resignation effective with the beginning of the new school year. The School of Medicine acknowledges the long and faithful service of Dr. Goldstein and commends him for the fine work he did in teaching genito-urinary pathology.

In his letter to Dr. Wagner, Dr. Goldstein ("Goldie" to many faculty members and former students) stated, "I want you to know that I have spent my most pleasant days with the students at the University of Maryland as well as with all the men in the Department of Pathology. I have always been keenly interested and still am interested. However, I feel that I now need a little rest.

"While I do not intend to dissociate myself entirely, please feel that if I can be of service to you and certainly to the University of Maryland whether it is the Medical School or otherwise, I shall always be happy to do so.

"I have obtained much knowledge at the University of Maryland during the past 35 years and I appreciate it."

ANNOUNCEMENT

NEXT CONGRESS, PAN AMERICAN MEDICAL ASSOCIATION
TO BE HELD IN MEXICO CITY

The next and 10th Inter-American Congress of the Pan American Medical Association will be held in Mexico City, the scientific sessions beginning on Monday, November 18-22, 1957.

MARYLAND SOCIETY FOR MEDICAL RESEARCH OFFERS NEW FILM

A much needed want has been filled with the production and release of a motion picture entitled "Handling Laboratory Animals." Prepared at the National Institute for Medical Research in England, the film runs for about 18 minutes and demonstrates how all of the common laboratory animals should be handled to eliminate discomfort and fear and to achieve the maximum of cooperation during experimental procedures. The film is accompanied by a sound tract. It may be obtained through the local office of the Maryland Society for Medical Research c/o Dr. Dietrich C. Smith, Secretary.

FORMER RESIDENT OPENS PRACTICE

Dr. Henry E. Langenfelder, until recently resident in surgery at the University Hospital, has announced the opening of his office for the practice of general surgery at 104 West Madison Street in Baltimore.

MERCY HOSPITAL NEWS

NEW HOSPITAL BUILDING PLANS

While detailed plans and specifications are not yet available, Sister Mary Thomas, R.S.M., Administrator, reports progress in the initial development of the structure to be erected on St. Paul Place between Saratoga and Pleasant Streets.

Dr. J. J. Rourke, nationally recognized consultant in the field of hospital construction, has been retained to determine just what facilities must be included in the new construction to best serve the over-all hospital needs of the community. Dr. Rourke is presently conferring with professional and non-professional Staff members in an effort to determine how best the new Mercy Hospital can help solve the two most pressing hospital problems—the tremendous shortage of hospital facilities and the advanced age of most existing hospital plants that serve Metropolitan Baltimore.

Working closely with Dr. Rourke is the Baltimore architectural firm of Taylor and Fisher, and their associate, Mr. Helge Westerman of New York City, a nationally recognized specialist in the field of hospital architecture. It is the task of this group to formulate actual construction plans and to supervise the erection of the new hospital.

MERCY HOUSE STAFF NEWS

Doctor Fernando Alonso-Lei, Associate Resident in Surgery came to Mercy after completing three years of Residency in Surgery at the Baltimore City Hospital.

Doctor Alonso is actively interested in Cardio-vascular Surgery and spends a great deal of his time in the “dog laboratory” at Mercy in experimental work.

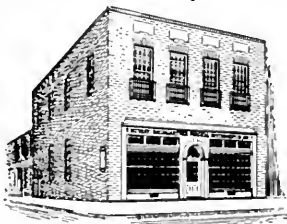
FORMER MEMBERS OF THE MERCY HOSPITAL HOUSE STAFF RETURN

Doctor Joseph T. Michels and Doctor Donald S. Carter, former members of the Mercy Hospital House Staff, who have spent the past two years in the Armed Forces, will return to Mercy on November 1, 1956. They will be Senior Assistant Resident in Gynecology and Obstetrics and Resident in Otolaryngology, respectively.

NEW MEMBER OF VISITING STAFF

Doctor Frank Kuehn, former Resident in Medicine (1955-56) has recently been appointed to the Visiting Staff at Mercy.

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ABSTRACTS

HEMODYNAMIC ALTERATIONS IN HEMORRHAGIC FEVER.* By George Entwisle, M.D., Assistant Professor of Medicine, Department of Medicine, University of Maryland, and Edward Hale, M.D., Chief of Medicine, V.A. Hospital, Leech Farm Road, Pittsburgh, Pennsylvania.

A hemodynamic study was done on 34 patients during the various stages of hemorrhagic fever. In the initial febrile phase some increase in cardiac output was noted, especially in patients with high fever. During the subsequent shock or hypotensive phase, striking reductions in cardiac output were seen associated in most patients with warm dry extremities and mild hemoconcentration. A minority of patients presented low cardiac outputs associated with a high peripheral resistance and moderate to marked hemoconcentration. The latter group responded well to treatment with intravenous human serum albumin and showed a rise in cardiac output. The former group was treated with nor-epinephrine and the resulting rise in mean arterial pressure was caused by increased peripheral resistance.

Twenty studies were performed during the hypertensive phase of hemorrhagic fever. Patients were divided into two groups according to the presence or absence of diuresis. When a hypertensive patient was also oliguric, high cardiac output was frequently found and it was associated with a normal or slightly elevated peripheral resistance. Hypertensive patients who had begun their diuresis had normal cardiac outputs and significantly elevated peripheral resistance.

Some of the patients during the hypertensive phase presented the clinical syndrome of "Relative-Hypervolemia" described by Earle. As a group these patients were oliguric, had high cardiac outputs with normal to low peripheral resistance and had higher blood volumes than the hypertensive patients not presenting this syndrome. Metabolic acidosis was common in this group.

Pulmonary edema, an infrequent but usually fatal complication of hemorrhagic fever, responded to therapy if the patients were also hypertensive at the time of pulmonary edema, but this complication was uniformly fatal in patients who were normotensive or hypotensive at the time edema developed.

TRANSIENT VENTRICULAR TACHYCARDIA FOLLOWING THE VALSALVA MANEUVER IN A PATIENT WITH PAROXYSMAL ATRIAL TACHYCARDIA.† By W. Hollander, M.D., Instructor in Medicine, Evans Memorial Hospital, Department of Medicine, Boston School of Medicine, and George Entwisle, M.D., Assistant Professor of Medicine, Department of Medicine, University of Maryland.

Transient ventricular arrhythmias have occurred during spontaneous reversion of paroxysmal auricular tachycardia and have also been described following various maneuvers used to convert paroxysmal atrial tachycardia such as carotid sinus

* Accepted for publication in the journal *Circulation*.

This project was performed under the auspices of the Hemorrhagic Fever Commission, Armed Forces Epidemiological Board, Walter Reed Army Medical Center, Washington 12, D. C.

† Accepted for publication in the *American Heart Journal*.

stimulation, ocular pressure, mecholyl and neostigmine. Of these latter methods, direct or indirect vagal stimulation is common to all, and may have been the basis for the development of transient ventricular tachycardia recorded during the Valsalva maneuver in the patient described. However, since this ventricular arrhythmia occurred during the Valsalva maneuver, the combination of adrenergic stimulation and myocardial ischemia could account for the arrhythmia.

URINARY EXCRETION OF 5-HYDROXYINDOLE ACETIC ACID, A SEROTONIN METABOLITE, IN HYPERTENSIVE RENAL-VASCULAR DISEASE.* By Francis J. Borges, M.D., Associate in Medicine, Division of Hypertension, Department of Medicine, University of Maryland, and Samuel P. Bessman, M.D., Associate Professor of Pediatrics, Department of Pediatrics, University of Maryland.

The urinary excretion of 5-hydroxyindole acetic acid in 6 patients with malignant hypertension and 2 patients with chronic glomerular nephritis is reported. Low levels were recorded for 3 patients exhibiting the malignant phase of hypertensive cardiovascular disease and both patients with chronic glomerular nephritis. All patients exhibited extensive renal involvement and 5 of the 6 patients with malignant hypertension had severe arterial lesions. The 2 patients with carcinoid tumors did not exhibit abnormal urinary 5-hydroxyindole acetic acid levels. Data are presented which show that proteinuria does not interfere with the estimation of 5HIAA in the urine.

INTRA-ATRIAL BLOCK.† By Samuel M. Bradley, M.D., Assistant Resident in Medicine, Mercy Hospital, Baltimore, and Henry J. L. Marriott, M.A., B.M. (Oxon) Associate Professor of Medicine, University of Maryland School of Medicine; Chief, Electrocardiograph Department, Mercy Hospital, Baltimore.

Attention is drawn to differences of opinion regarding the upper normal limit of P wave duration and the definition of intra-atrial block. There seems to be good reason for accepting 0.11 second as the upper limit of normal and a P wave duration of 0.12 second or more as indicative of intra-atrial block. By this criterion 4.5 per cent of 4500 consecutive electrocardiograms taken in a general hospital showed intra-atrial block, an incidence almost as great as that of atrioventricular or intraventricular block in the same series.

* Submitted to the Proceedings of the Society for Experimental Biology and Medicine.

The authors wish to acknowledge with appreciation the technical assistance of Miss Anne Rider.

This study was supported in part by the Hypertensive Foundation, Inc., Baltimore, Maryland and McCormick & Company, Baltimore, Maryland.

† This manuscript has been accepted for publication by *Circulation*.

POST GRADUATE COMMITTEE SECTION

POST GRADUATE COMMITTEE, SCHOOL OF MEDICINE

HOWARD M. BUBERT, M.D., *Chairman and Director*

Elizabeth Carroll, *Executive Secretary*

Post Graduate Office: Room 201

Old Medical Building, Lombard and Greene Streets

Baltimore 1, Maryland

BASIC SCIENCES

We are happy to announce that the Postgraduate course *Basic Sciences As They Apply to the Practice of Medicine* is to begin on January 9 and end on May 29. Classes will be held on Wednesday afternoons 4-6 P.M. Tuition is \$50.00. For further information please contact the Postgraduate Committee office.

SURGICAL ANATOMY

The Postgraduate course in Surgical Anatomy will begin on January 28 and end on June 8. Classes will be held on Mondays from 2-5 P.M. and on Wednesdays from 10 A.M.-1 P.M. Tuition is \$150.00. Because enrollment is limited, those physicians interested in taking the course should contact the Postgraduate office without delay.

"CALENDAR"

The Committee would appreciate your comments on the CALENDAR OF EVENTS, the publication which is sent from the Postgraduate Committee office weekly in an effort to keep you abreast of medical teaching on the campus.

TV-MD

The Sunday afternoon television presentation TV-MD over WBAL-TV, Channel 11, now in its sixth consecutive year, has as its theme for the current series "Then and Now" in keeping with this, the Sesquicentennial year of the Medical School. The Committee is grateful to all those of our faculty who are giving so generously of their time in the production of these programs.

ALUMNI ASSOCIATION SECTION

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DEAN'S LETTER

Dear Members of the Alumni:

The Medical School is attempting to increase the interest of the Alumni in its educational program. Approximately one year from now, we are initiating annual reports and we hope that we will be able to make it available to you for 1956-57. The report will contain definitive information on the faculty, students, educational program, research studies completed and in progress, and campus improvement in physical facilities.

In addition, where it is possible, members of the Medical School administration and faculty are attempting to attend gatherings of alumni at scientific and clinical professional sessions and annual meetings. Through this type of personal contact, we hope to be able to answer many of your questions and establish rapport that will be beneficial to the Alumni and to the Medical School. During the current school year the Dean has accompanied Dr. William H. Triplett, Director of the Medical Alumni Association to the North Carolina State Medical Society Meeting at Pinehurst. Through the good efforts of Dr. and Mrs. J. B. Anderson of Asheville, a delightful luncheon was held for him by North Carolina University of Maryland Alumni and their wives.

Again at the annual meeting of the West Virginia State Medical Association at White Sulphur Springs, August 23-25, Dr. Triplett and the Dean had the pleasure

of meeting with the Maryland Alumni and wives at a cocktail party arranged by Dr. William D. McClung and Dr. James A. McClung for the evening of August 23rd.

The wonderful hospitality and interest in the Medical School by the Alumni of West Virginia and North Carolina are adding greatly to the good fellowship developing among the Alumni of the University of Maryland, School of Medicine.

We hope that all of you will take every opportunity to visit the School in person, and that we will have the pleasure of showing you the educational program and research being done at Lombard and Greene Streets in Baltimore.

WILLIAM S. STONE, M.D.

Dean

DR. CHARLES REID EDWARDS NOMINATED RECIPIENT OF 1957
HONOR AWARD



DR. C. R. EDWARDS

TO RECEIVE HONOR ON OCCASION OF SESQUICENTENNIAL ALUMNI CELEBRATION,
JUNE 6, 1957

Dr. Charles Reid Edwards, for many years Professor of Surgery in the School of Medicine and active on the staff of University Hospital as a Clinical Surgeon, has been nominated recipient of the Medical Alumni Association's 1957 Honor Award and gold key.

This award established in 1948 for "outstanding contributions to medicine and distinguished service to mankind" is presented annually to an alumnus who has earned this honor through outstanding achievements as required for the nomination.

A native of Medley, West Virginia, Dr. Edwards attended the Adamstown School in Frederick County, Maryland and was graduated from the School of Medicine,

University of Maryland in 1913. Following an internship at the University hospital he became an assistant in orthopedic surgery serving until 1916 when he went on active duty with the Army of the United States with the rank of 1st Lieutenant in the Medical Corps, being promoted ultimately to Captain.

Upon his return from service, he was appointed to the staff of the University Hospital serving as assistant in surgery and subsequently was promoted in 1929 to Professor of Clinical Surgery. With the retirement of Dr. Arthur M. Shipley, Dr. Edwards assumed the professorship and ably conducted the department until the appointment of his successor Dr. Robert Buxton who now serves as Departmental Chairman and Professor.

Long interested in clinical surgery, Dr. Edwards has earned the deepest respect and admiration of his fellow colleagues and practitioners.

He is a member of the Medical and Chirurgical Faculty, the American Medical Association, the Southern Medical Association, the American College of Surgeons, the Southern Surgical Association, the Clinical Surgical Society, The American Society for the Surgery of Trauma and the American Surgical Association. He is a member of the Nu Sigma Nu fraternity.

For many years, Dr. Edwards has loyally supported the cause of the School of Medicine and following World War II was largely instrumental in taking the cause of the University before the Board of Regents and the Legislature which resulted in the initial phase of the development of the School of Medicine. For a number of years he has been active on the Board of Directors of the Medical Alumni Association. He has been a member of a number of Medical School committees and to the younger faculty has been a reliable source of tempering influence and advice. As one alumnus has simply stated, "A finer man, a finer doctor and a finer example of patient wisdom one could never know."

FIFTY YEAR VETERANS TO BE FETED

The Medical Alumni Association is already laying active plans for a celebration on June 6, 1957 in honor of the class of 1907. Members of the Golden Anniversary classes of the 3 schools will be honored at the Sesquicentennial celebration marking Alumni and Commencement week. Listed below are the known members of the class of 1907 graduated on the occasion of the Centennial of the School of Medicine and who no doubt will return to receive the 50 year honor certificate on the occasion of the Sesquicentennial celebration in June.

GOLDEN ANNIVERSARY CLASSES

1907-1957

(CENTENNIAL CLASS)

University of Maryland

Otho P. Argabrite	Julius E. Gross	John Burr Piggott
James H. Bates	Joseph I. Kemler	Harry Y. Righton
Jacob W. Bird	Arthur E. Landers	Herbert Schoenrich
James S. Fox	Thomas H. Legg	Charles I. Shaffer
Walter C. Gordon	James E. Mann	

Baltimore Medical College

Elmer J. Beaulieu	Ezra A. Jones	Herman Paul Rieger
Napoleon Bisson	Frank V. Langfitt	Weaver B. Rogers
Merritt Brice	Clarence V. Langfitt	Otto W. Scholpp
Dominick Di Pasca	Jacob L. Mathesheimer	Frank J. Schwartz
William Fessler	Peter C. Mikkelsen	Philip J. Spaeder
Adolph Flachs	James J. O'Connor	Fred E. Steele, Jr.
Leo L. Gardner	Benjamin Parvey	William J. V. Taylor
Louis L. Hoff	Albert E. Perron	Charles Vincent, Jr.
Howard T. Horsley		

College of Physicians and Surgeons

Walter A. Carr	Frederick C. Lamar	Desausser G. Preston
Walter W. Columbus	T. Frederick Leitz	Earl L. Reger
James J. Donohue	Frederick L. McLeod	Edward E. Rose
Edward H. Freeman	Joseph C. Peck	William J. Schmitz
Earl F. Glass	Ernest M. Perry	Edmond D. Tucker
Michael J. Griffin	Jesse A. Powell	John I. Wiseman
Arthur W. Higgins		

ALUMNI ASSOCIATION TO SPONSOR COCKTAIL PARTY AT AMERICAN MEDICAL ASSOCIATION MEETING

RECEPTION TO BE HELD ON EVENING OF JUNE 5, 1957

The Medical Alumni Association has announced the formation of a committee which will arrange and conduct a cocktail party for University of Maryland alumni and their ladies on the occasion of the annual meeting of the American Medical Association which will be held in New York City June 3-7, 1957.

Dr. Joseph Nataro, 172 Littleton Avenue, Newark 3, New Jersey is Chairman of a committee which has already arranged for the party to be held in the air-conditioned cocktail lounge in the New York Coliseum on the evening of Wednesday, June 5, 1957 from 5 to 7 P.M.

While preliminary arrangements are now in progress and while further details of this party will be carried in the April, 1957 issue of the Bulletin, all interested are urged to inquire further of the Medical Alumni Association or through Dr. Nataro.

The Association sincerely hopes that this affair can be included as one of the more important functions of the Alumni Association during the Sesquicentennial year.

NOTICE

COMMEMORATIVE SESQUICENTENNIAL ITEMS ON SALE BY WOMEN'S
AUXILIARY BOARD

The Women's Auxiliary Board of the University Hospital in honor of the Sesquicentennial Year presents a commemorative cup and saucer and ash tray for sale. Each piece will carry the inscription "150 years of Medical Education" together with the seal of the University. These items will be on sale during the Sesquicentennial Year in the Gift Shop of the University Hospital. They may be obtained either by phone order or by letter. Prices are available upon inquiry.

OBTAIN YOUR COMMEMORATIVE MEDAL NOW



As announced in a previous number of the Bulletin, the Medical Alumni Association is sponsoring a Commemorative Medal to be placed on sale during the month of January. The medal illustrated herewith will be struck principally in bronze but a limited addition of silver coins will be available, these being the first to be struck.

The price of the silver medal will be \$6.00 postpaid and for the bronze \$3.00. Orders should be sent to the Medical Alumni Association, University of Maryland, Lombard and Greene Streets, Baltimore 1, Maryland accompanied by remittance. Medals will be forwarded shortly after the issue date which is expected to be January 20, 1957.

DR. NEAFIE HONORED

Dr. Charles A. Neafie, class of 1909, and a resident of Pontiac, Michigan, was the recipient of the 7th annual award of the Oakland County Medical Society for "distinguished service to medicine."

ITEMS

Recent publications by Dr. Samuel L. Fox of the class of 1938 include "Nasal Polyps in Relation to Nasal Sinusitis" (*Eye, Ear, Nose and Throat Monthly* 35: 492-496 August 1956) and "Vasomotor Rhinitis in Hypertension" (*Maryland State Medical Journal* Volume 5, Number 3, March 1956).

Dr. Jacob H. Conn, class of 1929, has been invited to become a member of the Editorial Board of the Publication Society of the Institute of Research in Hypnosis. Dr. Conn is a member of the Editorial Boards of *The Journal of Clinical and Experimental Psychopathology*, *The Nervous Child*, *The Archives of Criminal Psychodynamics*, *The Journal of Clinical and Experimental Hypnosis*, and *Tice's System of Medicine*. Dr. Conn lectured on "The History of Hypnosis" in October 1956 in New York during the Workshop on Hypnosis which is under the auspices of the Long Island University and the Society for Clinical and Experimental Hypnosis.

Dr. Lorman L. Hoopes, class of 1941 and a Diplomate of The American Board of Obstetrics and Gynecology, has been elected a Qualified Fellow of The International College of Surgeons, Section of Obstetrics and Gynecology.

Dr. Ira C. Long, class of 1923, has retired as Superintendent of the State Hospital at Goldsboro, North Carolina after having served on the staff of that hospital for 20 years, the last 11 years as Superintendent. Dr. Long now resides in Bonham Heights, Morehead City, North Carolina.

Dr. John F. Strahan, class of 1949, having completed his residency in dermatology, has passed the American Board of Dermatology and is now a member of the staff of the Division of Dermatology at the School of Medicine. Dr. Strahan is also associated in private practice with Dr. Harry M. Robinson, Jr.

Dr. Joseph D. Lichtenberg, class of 1950, has announced the opening of his office for the practice of psychiatry at 11 East Chase Street, Baltimore 2 Maryland.

Dr. Henry J. Walton, Professor Emeritus of Roentgenology, **Dr. Walter L. Kilby** and **Dr. Charles N. Davidson** have announced the association of **Dr. Henry H. Startman, Jr.**, class of 1950, in the practice of roentgenology. They have also announced the opening of a new branch office at 7307 York Road, Towson 4, Maryland.

Dr. Stephen K. Padussis, class of 1948, has announced the opening of his office at 401-402 Medical Arts Building in Baltimore. Dr. Padussis is engaged in the practice of general surgery.

Dr. William G. Thuss, Jr., class of 1948, has announced his return to active practice with the Thuss Clinic for Industrial Medicine and Surgery at 2230 3rd Avenue, North, Birmingham 3 Alabama. In June, 1956, he received the degree of Doctor of Science in Industrial Medicine from the University of Cincinnati, following a three year Fellowship in Industrial Medicine at the Kettering Laboratory of the College of Medicine of the University of Cincinnati.

Dr. Robert W. Farr, class of 1934, has been recently elected president of the Maryland Academy of General Practice.

Dr. Harry M. Robinson, Jr. Professor of Dermatology, has recently been elected a councilor of the Southern Medical Association representing the State of Maryland. Dr. Robinson will replace Dr. J. Morris Reese, class of 1920, who has completed his term of office on the Council. Dr. Harry M. Robinson, Jr., Dr. R. C. V. Robinson and Dr. John F. Strahan presented an exhibit on "Tranquilizers in Dermatology" at the meeting of the Southern Medical Association in Washington, D.C. in November, 1956. The same exhibit was presented at the meeting of the American Academy of Dermatology in December. Drs. Harry M. Robinson, Jr., R. C. V. Robinson and John F. Strahan also presented a paper before the Southern Medical Association entitled "Hydroxizine Hydrochloride a New Tranquilizer".

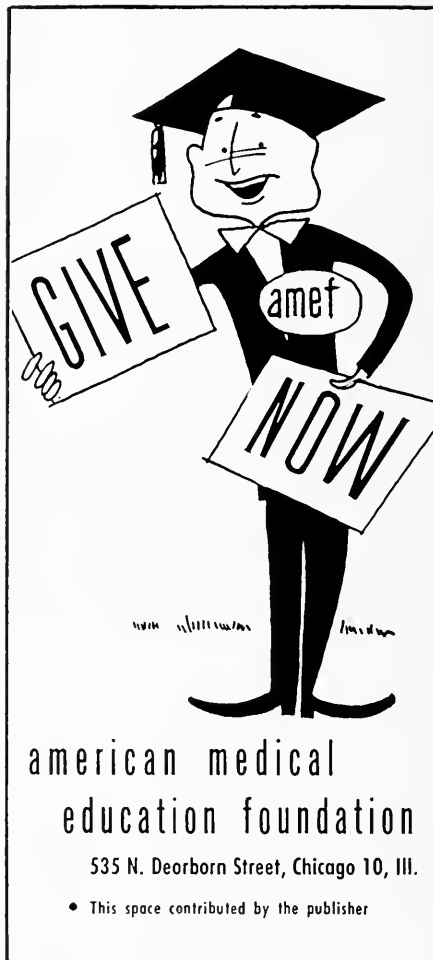
Dr. Francis A. Ellis, class of 1925, was a panelist on the symposium of "Histopathology of Skin Diseases" held for the section of dermatologists during the meeting of the Southern Medical Association in November, 1956. Dr. Ellis was also a participant teacher in pathology at the meeting of the American Academy of Dermatology in Chicago in December, 1956.

Dr. Francis J. Borges, class of 1950, is currently Chairman of the Rehabilitation Program of the Heart Association of Maryland.

Dr. **José Alvarez de Choudens**, class of 1944, now on duty with the United States Navy at the United States Naval Hospital at St. Albans, New York, has been recently promoted to Commander in the Medical Corps, United States Naval Reserves. Dr. Alvarez will shortly complete his tour of duty and will return to his practice in San Juan, Puerto Rico.

Dr. **Aaron Finegold**, class of 1943, is currently serving as Instructor in Neurology at the University of Pittsburgh School of Medicine. Dr. Finegold was a recent visitor to Baltimore on the occasion of the Phi Delta Epsilon alumni club dinner.

Dr. **John D. Rosin**, class of 1942, is currently serving as vice-president of the Baltimore graduate club of Phi Delta Epsilon fraternity.



Obituaries

Dr. Oliver S. Lloyd

Dr. Lloyd was born at Western Run, Baltimore County, Maryland, July 9, 1884 and was graduated by the College of Physicians and Surgeons, now combined with the University of Maryland, in 1909. As a house-officer at Mercy Hospital, Dr. Lloyd quickly established himself as reliable and capable, resulting in his becoming the resident surgeon and being chosen subsequently to work with Dr. A. C. Harrison for a time. His private practice grew rapidly and his reputation earned him many places of importance. He became surgeon to the Baltimore City Fire Department in 1928, serving them for nearly 28 years. He was on the staffs of Mercy Hospital, Lutheran Hospital and the South Baltimore General Hospital, being chief surgeon of the South Baltimore General Hospital from 1945 to 1952, when he resigned.



THE LLOYD HIP SCREW IN PLACE



DR. OLIVER S. LLOYD

He was a member of the American College of Surgeons, International Surgical Congress, Southeastern Surgical Congress, Southern Medical Association, American Medical Association and the Baltimore City Medical Society.

He was a member of the Baltimore Country Club, Skytop Club and was closely associated with the Young Men's Christian Association for more than 45 years.

Dr. Lloyd was quite athletic, his greatest interest, perhaps, being wrestling, which carried him from the local YMCA to neighboring places, such as matches at the United States Naval Academy.

Many instances of his moral and physical courage could be related. We will omit the events that gave rise to examples of the former and mention only two or three of the latter.

A "bum" found sleeping in the hospital hallway was ordered out. Instead of leaving as ordered, he grabbed a piece of furniture and started for Dr. Lloyd. In a few seconds he was out on his ear. In a minute or two Lloyd, who was on accident duty, was called to treat a patient, who had fallen down the steps and hurt himself!

A pick-pocket at Pimlico was not too deft and Dr. Lloyd felt the filching of his watch. The pick-pocket was unfortunate in choosing his victim. In two seconds he was on the ground being held for the police.

When the Baltimore Country Club burned, Dr. Lloyd, in his capacity as fire surgeon, went under the burning building and rescued an injured fireman. Such an act, plus his devotion to duty and kindness, endeared him to the whole Fire Department and their respect and admiration were evidenced by their tribute at his funeral.

Dr. Lloyd was endowed with the qualifications of a good practical clinical surgeon, with an excellent mechanical turn, plus interest in the scientific facets of problems. He contributed to surgery one of the most ingenious instruments for internal fixation of fractures of the neck of the femur—the Lloyd lag screw or Lloyd hip screw. In the development of this instrument, he made a deep study of various metals, their tensile strength, their tendency to corrosion, their production of electrolysis and the mechanics of different kinds and depths of threads of the screw, etc. This screw has been used successfully by many general surgeons and orthopedists and its originator developed quite a consulting practice in the treatment of broken hips.

It is somewhat of a coincidence that two graduates of the College of Physicians and Surgeons, within a year of each other, Dr. H. H. Haynes—1908 and Dr. Lloyd 1909, without association or collaboration, should have made reputations in the treatment of fractures by ingenious fracture apparatus.

Ollie Lloyd had a square jaw, square shoulders and thought and acted in a square manner. He could not do a mean act but he dearly loved to do a kind one. He merited and received the love and admiration of his patients, his countless friends and his family.

Dr. Lloyd died October 27th, 1956. He is survived by his wife, the former, Miss Jane Scott; a son, Galvin Lloyd, of Winchester, Va; and a daughter, Mrs. Frederick Stuart, Jr., of Baltimore; a sister, Mrs. Ethel Lloyd Morse, of Baltimore and a brother, Lowndes Lloyd, of Syracuse, N. Y.

WALTER D. WISE, M.D.

Dr. Mervin T. Sudler

Dr. Mervin Tubman Sudler, class of 1901, P & S, and former Dean of the Kansas University School of Medicine, died on June 22, 1956, aged 80.

Born in Westover, Maryland, Dr. Sudler received his Bachelor of Science degree from the Maryland Agricultural College in 1894 and his degree of Doctor of Philosophy in 1899 from the Johns Hopkins University. He then enrolled in the College of Physicians and Surgeons in Baltimore, receiving the degree of Doctor of Medicine in 1901.

Dr. Sudler was a Fellow of the American College of Surgeons, a member of the American Medical Association and the Nu Sigma Nu medical fraternity.

Dr. Louis K. Walker

Dr. Louis Kyle Walker, class of 1911, died May 17, 1956, at Ahoskie, North Carolina, aged 67.

A graduate of the University of North Carolina and the University of Maryland School of Medicine, Dr. Walker began the practice of medicine in Ahoskie in 1914 and was later appointed chief of staff of the Roanoke-Chowan Hospital in that city.

He was a member of the Hertford County and North Carolina Medical Societies and was active in cancer, tuberculosis and Red Cross campaigns.

Dr. Paul E. Carliner

Dr. Paul E. Carliner, class of 1934, a prominent research scientist, died October 13, 1956, aged 46.

Dr. Carliner was pre-eminently known for the development of the drug dramamine, often referred to as one of the miracle drugs. First used for the treatment of seasickness during World War II, the drug has become a standard remedy for this malady. Original research was done by Dr. Carliner in association with Dr. Leslie Gay on 1,376 service men aboard an army transport in the rough North Atlantic in December, 1946.

Dr. Carliner, who interned at Sinai Hospital, was later a resident physician there and was active on the staff of the Johns Hopkins Hospital.

Dr. John Forsyth Aubrey

John Forsyth Aubrey, an Army doctor who served in both World Wars, and a sanitation officer during the construction of the Panama Canal, died in Washington, D. C. on October 4, 1956, after a long illness.

Dr. Aubrey was the son of the late Judge William Aubrey of San Antonio. His grandfather, John Forsyth, was a former governor of Georgia and served as Secretary of State under Presidents Martin Van Buren and Andrew Jackson.

Dr. Aubrey was born in Lynchburg, Virginia. He attended the University of Texas and Johns Hopkins University and received his medical degree from the University of Maryland in 1921. He lived in Baltimore for 30 years and served as surgeon at the Maryland State Penitentiary. He also was a member of the Baltimore Board of Education.

Dr. Aubrey served as medical officer with the 29th Division during World War I and was a surgeon at the Philadelphia Signal Depot during World War II.

He was a member of the Baltimore City Medical Society and the Medical and Chirurgical Faculty of Maryland, the American Medical Association, the Military College of Surgeons, the Panama Canal Society, the Veterans of Foreign Wars and the American Legion.

He is survived by his wife, Florence Conner Aubrey of Miami, Florida, a daughter, Ann Aubrey Brown of Cambridge, Massachusetts, a sister, Eugenia Buckley of San Antonio, and one grandchild.

Funeral service were held at the Fort Myer Chapel and burial was in the Arlington National Cemetery.

JOHN F. HOGAN, M.D.

Anderson, Richard Speight, Whitakers, N. C.; class of 1924; served during World War II; aged 57; died, June 6, 1956.

Baum, Edward, Philadelphia, Pa.; B.M.C., class of 1895; aged 86; died, July 2, 1956.

Duffy, Vincent Paul, Grafton, W. Va.; class of 1917; aged 72; died, May 3, 1956, of cerebral hemorrhage.

Gorham, Herbert Jenkins, Nashville, N. C.; class of 1926; aged 55; died, June 17, 1956.

Herbert, Alpha N., Miami, Fla.; class of 1925; aged 55; died, June 22, 1956, of abdominal aneurysm.

Hower, Heister V., Berwick, Pa.; P & S, class of 1887; aged 92; died, April 16, 1956.

Hundley, Preston G., Lynchburg, Va.; class of 1909; aged 76; died, April 28, 1956, of leukemia.

Johnson, James White, Union Level, Va.; B.M.C., class of 1907; aged 76; died, May 31, 1956.

Johnston, Ernest H., Waterbury, Conn.; class of 1900; aged 77; died, May 3, 1956, of bronchopneumonia and adenocarcinoma of the rectosigmoid.

Jones, Edgar A. P., Cambridge, Md.; B.M.C., class of 1893; aged 83; died, May 27, 1956, of arteriosclerosis.

Keim, Albert L., Pittsburgh, Pa.; B.M.C., class of 1913; aged 71; died, July 28, 1956.

Kelly, William Henry, Sanford, Me.; B.M.C., class of 1905; aged 87; died, February 18, 1956, of coronary heart disease and arteriosclerosis.

Marchant, J. Henry, Baltimore, Md.; class of 1891; also a dentist; died, July 2, 1956.

Noland, Stacy Taylor, Rehobeth Beach, Del.; P & S, class of 1914; aged 66; served during World War I; died, July 17, 1956, of bronchogenic carcinoma.

Palmateer, Arthur Clare, New York, N. Y.; P & S, class of 1906; aged 74; died, April 27, 1956, following a gall bladder operation.

Pulaski, Leo Edward, Shenandoah, Pa.; class of 1925; aged 57; died, May 6, 1956, of rheumatic heart disease.

St. George, Archibald, South Swansea, Mass.; P & S, class of 1895; aged 88; died, June 16, 1956.

Sisler, Franklin Herbert, Bristow, Okla.; P & S, class of 1910; aged 68; died, April 7, 1956, of cerebrovascular accident.

Sudler, Mervin Tubman, Lawrence, Kan.; P & S, 1901; aged 80; died, June 22, 1956, of coronary occlusion.

Walker, Louis Kyle, Ahsokie, N. C.; class of 1911; aged 67; died, May 17, 1956, of pneumonia and cerebral hemorrhage.

MEDICAL SCHOOL SECTION

MEET THE EMERITI



Dr. Irving J. Spear is celebrating his 80th birthday this year. He was born in Alsfield, Germany, March 10, 1877 while his parents were visiting relatives abroad. Both his parents were born and raised in Baltimore, as was Dr. Spear. His father was a prosperous owner of a shoe store on Pratt Street and was proud and ambitious for his son. Young Irving attended the public schools for his elementary education and graduated from Baltimore City College in 1896.

He had decided early on medicine as a career and chose the University of Maryland from among the many medical schools that were then existent in Baltimore. The prominent professors at the institution in those days were: Tiffany, Winslow, Gilchrist, and Chew. After graduation, Dr. Spear took an internship at Bay View, the present Baltimore City Hospitals. His interest was already in neuro-psychiatry. While at Bay View he gained experience under the direction of Dr. Henry J. Burkle, the professor at Johns Hopkins.

Dr. Spear then sought to further broaden his training and spent two years at clinics in Munich, Vienna, Berlin and Paris. It was the invariable custom in those days to polish off a medical education by spending some time abroad. He

returned to Baltimore as Superintendent of the Psychiatric Division at Bay View in 1903. He immediately associated himself with his Alma Mater in a teaching

capacity and this relationship has remained for over 50 years. Dr. McElfresh was Professor of Neuropsychiatry at this time. Dr. Spear assumed greater teaching responsibility in the department from 1904 to 1915. He followed Dr. Richardson as Professor. About this time, he compiled a textbook entitled "Manual of Nervous Diseases", published in 1916 by W. B. Saunders and used by the School of Medicine as a students' text for a number of years.

Dr. Spear offered his services to his country with the outbreak of World War I and enlisted with the rank of captain. His assignment was at Fort McPherson in Atlanta. At this hospital he worked with Dr. Babcock as his Commanding Officer, diagnosing, evaluating and treating the many cases of traumatic nerve injuries shipped back from the battlefields of France. Dr. Babcock's special interest at this time was nerve surgery. Together they reported on over 2,000 cases of nerve injury treated surgically.

Dr. Spear returned to Baltimore in the fall of 1919 with the rank of major. He took up his duties as Professor at the University and again became active in his consultant practice. Dr. George Settle was acting Professor in Dr. Spear's absence. The outpatient clinic was exceedingly active at this time in neuro-psychiatry, being the largest clinic at the University.

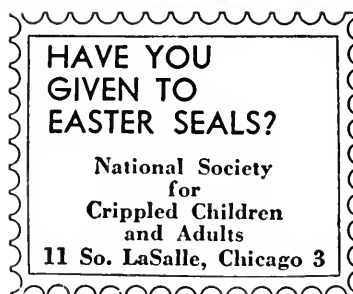
The departments of neurology and psychiatry were combined up to the advent of Dr. Ross Chapman in about 1925. Dr. Spear continued as Professor of Neurology until his retirement to Emeritus Professor. He has maintained an active private practice in neuropsychiatry since his return from Europe in 1903. In a consultant capacity he is still active in insurance and court work within his specialty. In addition to his textbook he has contributed over 200 articles to the medical literature.

In 1907 Dr. Spear married his childhood sweetheart, Hortense Hamburger Greenwald. She was an artist of some accomplishment and many of her paintings adorn the walls of Dr. Spear's apartment. They enjoyed almost 40 years of happy married life together until her death in 1948. There were no children. Dr. and Mrs. Spear traveled widely during their vacation periods. He was also a constant attendant at medical meetings and conventions of neuropsychiatrists.

Dr. Spear continues his interest in the arts and his apartment contains many antiques, prints and figurines collected and treasured by Mrs. Spear and himself through the years.

Dr. Spear is a gentleman physician of the old school, a charming conversationalist and still keen in all his faculties.

We salute this Octogenarian among our Emeritus Professors.



OBTAIN YOUR COMMEMORATIVE MEDAL NOW



The Medical Alumni Association can still offer a few of the fine, registered silver medals struck in commemoration of the 150th Anniversary of the School of Medicine. These may be obtained by writing the Medical Alumni Association, Lombard and Greene Streets, Baltimore 1, Maryland. Prices are as follows:

Silver—\$6.00 plus \$.60 Federal Tax and \$.12 Maryland State Sales Tax (where applicable)

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MEDICAL LIBRARY NOTES

Books and journals were received from the following donors between August 1, 1956 and February 1, 1957:

Dr. Charles Bagley, Jr.	Dr. Samuel M. Jacobson
Dr. Alice Band	Dr. Arthur M. Kraut
Dr. Eugene Blank	Mr. Bertram Ney
Dr. Louis V. Blum	Dr. Robert T. Parker
Dr. Robert W. Buxton	Dr. Maurice C. Pincoffs
Dr. Henry V. Chase	Dr. Harry M. Robinson, Sr.
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Dr. Samuel S. Glick	Dr. Douglas Smith
Dr. Frank W. Hachtel	Mr. H. J. Sobilloff
Dr. Manuel D. Hornedo	Dr. John A. Wagner
Hynson, Westcott, and Dunning	Dr. Charles H. Williams
Dr. George H. Yaeger	

Generous checks have been received from Dr. Arthur M. Kraut and Dr. A. Frank Thompson, Jr.

THE LIBRARY BUILDING

In the first weeks of 1957 Davidge Hall, two adjoining buildings on Lombard Street, and one on Lemmon Street were torn down to provide the site for the library building which will combine the present libraries of medicine, dentistry, pharmacy, nursing, and psychiatry. The Bulletin here presents an architectural representation to give some impression of the ultimate appearance of the new health sciences library.

Such drawings, however, in their reproduction for the printed page, cannot necessarily convey a full picture. For example, it is hardly clear in the accompanying photograph that the new library building will be three stories high (with a fourth floor of basement also at the south end). The incline of Greene Street, which is greater than appears to the casual eye, determines the level of the ground floor, with the north end partly below ground but the south end at street level. In the picture, this floor is obscured by suggested planting along the grass plot surrounding the north and west sides of the library.

Probably the two most serious errors made in library planning are these: lack of allowance for future growth, and failure to plan functionally from the inside to the out. Verified statistics assembled by library experts over the years show that active college libraries double their book collections at least every sixteen years. Planning a costly building, expected to last indefinitely, makes it vital to allow expansion which may seem almost unbelievable at the start. The agreement of the University and of State officials in permitting this building to be planned of ample size and so constructed that another story of book stacks may eventually be added shows unusual insight. This plan to provide for the far future was another factor, of course, in determining the design of the library; obviously a later addition could be superim-



SOON TO RISE

Architect's drawing of new Library Building which will shortly be constructed on the site of Davidge Hall

posed only on a flat roof. The setting for the building also had to be limited to a narrow strip of "campus" on two sides, in order to have enough space for the modular requirements of the basic structure.

Administrative wisdom was likewise evident in the procedure which allowed planning to begin from the inside of the building, with needs of a smoothly functioning library the criterion. The director of libraries and the medical librarian, with help from the library staff, experimented with various plans before beginning official work with the architect, and thereafter in coordination with the architect's contribution. Since a main entrance on Lombard Street or at the corner appeared desirable, attempts were made to design a satisfactory interior leading to the narrower side of the building. This proved impracticable if optimum arrangement and control were to be maintained, reading rooms placed at the favorable north end, and long, objectionable corridors avoided. The best interior plans that could be devised placed the entrance at about center on Greene Street. When the preliminary plans for our library building were presented for criticism at the national Library Buildings Plan Institute (held yearly for people planning college and reference libraries) the arrangement was pronounced basically sound and advisable by library building consultants and other experts there.

When the major interior planning had been established, the Board of Regents of the University and officials responsible for State buildings decided upon the exterior of the library from a series of architectural designs ranging from colonial to modern. The ultimate choice was perhaps influenced by knowledge that across from the

library on Greene Street will later be erected (replacing the old University Clinic building) a student-faculty union building of ultra-modern appearance. The motif at the entrance of the library, however, is taken from that of the Bressler building and the University Hospital. Not until the library building itself appears can we gain a full conception of its image.

In the next issue of the Bulletin, letters will be quoted from two library-minded alumni, located in different parts of the country but sharing and expressing the same interest in the library. These two friends have been regularly contributing money which is deposited in the Ruth Lee Briscoe Library Fund to be expended for any library needs. Currently some of these funds are being used toward the binding of many back volumes of medical journals which have formerly had to remain unbound. In view of the new library building, it seems of special importance to get the periodical collection into the best condition for use and for preservation.

FACULTY MEMBER HEADS AMERICAN CHEMICAL SOCIETY GROUP

Dr. Raymond M. Burgison, Assistant Professor of Pharmacology, has recently been elected chairman of the Maryland section of the American Chemical Society.

MARYLAND STUDENT AGAIN WINS SCHERING AWARD

Mr. Richard K. B. Ho of Hawaii and a senior in the School of Medicine, was recently awarded the annual \$500 prize and special award certificate for his research paper entitled "The Clinical Use of Adrenocortical Steroids in Collagen Diseases".



Mr. Richard Ho receives his prize from Dr. C. J. Szmál of the Schering Corporation. L. to r.—Mr. Ho's son, Stephen. Mrs. Ho, Mr. Ho, Dr. Szmál and Dean William S. Stone.

The annual award sponsored by the Schering Corporation was presented to Mr. Ho at ceremonies in the office of the Dean of the School of Medicine.

Established in 1940, the contest usually offers prizes to medical students for best paper submitted on three selected medical topics of current interest.

MERCY HOSPITAL SECTION

MEMBERS OF THE VISITING STAFF APPEAR ON TV

Dr. Walter D. Wise, Chairman of the Board of Governors, appeared as a guest on "Your Family Doctor" presented on WMAR-TV on November 30th.

In an interview regarding the Mercy Hospital Building Fund, Dr. Wise discussed the City's need for hospital beds and showed models of the 21-story New Mercy Hospital.

On January 6th, Dr. Daniel J. Pessagno, Chief of Surgery, Dr. Patrick C. Phelan, Jr. and Dr. William B. Rever, Jr., members of the Visiting Surgical Staff, appeared on the weekly Sunday Program TV-MD. Their topic of discussion was "Intestinal Obstruction."

On April 14th, Dr. H. Raymond Peters, Chief of Medicine and Dr. Robert E. Ensor, who is in charge of the Anticoagulant Laboratory at Mercy will appear on TV-MD. They will discuss "The Use of Anticoagulants in Coronary Thrombosis."

FOUR MEMBERS OF THE VISITING STAFF RETURN FROM MILITARY DUTY

Four members of the Visiting Staff returned to Mercy after completing tours of military duty, they are: Dr. James Russo, Medical Anesthetist and Head of the Department of Anesthesia, Dr. William Dunnigan, Dr. Edward P. Coffay, Jr. and Dr. Frank Faraino.

Dr. Calvin Y. Hadidian, a member of the Visiting Surgical Staff at Mercy, left Baltimore to establish a practice in Cumberland, Maryland. In addition to his work at Mercy, Dr. Hadidian was also a member of the Teaching Staff of the University of Maryland School of Medicine.

RESIDENT IN PEDIATRICS ATTENDS COURSES

Dr. George M. Bauernschub, Jr., Resident in Pediatrics, took a course in Pediatric Cardiology at Cook County Graduate School of Medicine from November 5-11th. From November 12-15th he attended a course in Pediatric Endocrinology and Related Metabolism at New York University Post Graduate Medical School.

CARDIO-PULMONARY LABORATORY TO BE STARTED

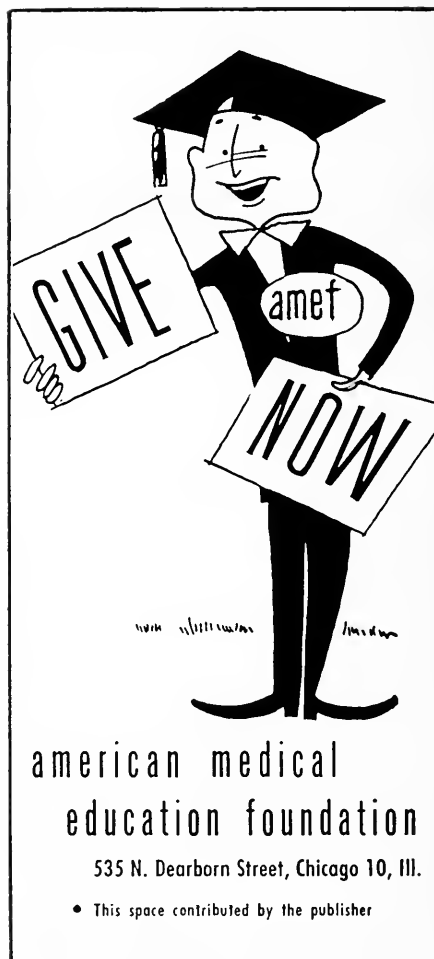
Mercy Hospital is in the process of establishing a Pulmonary Function and Cardiac Catheterization Laboratory which will open in March or April. This new laboratory one of the very few in the General Voluntary Hospitals, will be headed by Bruce W. Armstrong, M.D. Dr. Armstrong was formerly in charge of the Cardio-Pulmonary

Laboratory at the Loch Raven Veterans Hospital. He is Assistant Professor of Surgery at the University of Maryland School of Medicine.

In addition to Dr. Armstrong the laboratory will be staffed by several technicians. The Resident in Thoracic Surgery will have in his training, duties in the laboratory.

CHIEF OF PATHOLOGY ATTENDS MEETING

Dr. C. Gardner Warner, Chief of the Pathological Department, recently attended the annual meeting of the College of American Pathologists at the Drake Hotel, Chicago, October 7th-12th. The sessions were chiefly directed toward the cytologic diagnoses of cancer.



POST GRADUATE COMMITTEE SECTION

POST GRADUATE COMMITTEE, SCHOOL OF MEDICINE

HOWARD M. BUBERT, M.D., *Chairman and Director*

Elizabeth Carroll, *Executive Secretary*

Post Graduate Office: Room 201

Old Medical Building, Lombard and Greene Streets

Baltimore 1, Maryland

BASIC SCIENCES

The Postgraduate course *Basic Sciences as They Apply to the Practice of Medicine* began on January 9 with an enrollment of fifty physicians from all sections of the state. Up to this writing, hazardous road conditions on occasion notwithstanding, attendance has been most gratifying. This is a 21 week, 42 hour course for which full Category I credit is allowed by the American Academy of General Practice.

MEDICAL CRUISE

The Postgraduate Committee is planning a medical cruise to the Caribbean in the fall of 1957. During the cruise twenty hours of postgraduate teaching will be given for which credit will be allowed by the American Academy of General Practice. The complete program and further details of the cruise will be included in this section of the July issue of the BULLETIN OF THE SCHOOL OF MEDICINE.

SURGICAL ANATOMY

The postgraduate course *Surgical Anatomy* under Dr. Otto C. Brantigan continues to retain its popularity from year to year. This course begins with the second semester of the medical school and continues through May. Enrollment is necessarily limited.

SYMPOSIUM ON INDUSTRIAL MEDICINE

The Postgraduate Committee of the School of Medicine will sponsor a symposium on Industrial Medicine at the School of Medicine on May 14, 15, and 16, 1957.

The symposium will cover problems in the screening and reporting on the medical examination of employees, selected industrial health problems of importance, and the importance of professional understanding and cooperation between general practitioners and physicians in industrial medicine.

The tentative program being prepared covers the following subjects:

Tuesday, May 14

1. A safety engineer looks at industrial medicine
Discussion
2. The toxicology of volatile solvents and gases in industrial practices
Discussion

3. Protective measures required for safe operations where volatile solvents are used in industry
Discussion
4. Radiation hazards in industry
Discussion
5. Protective measures required where radiation hazards exist
Discussion
6. Alcoholism as a problem in industrial manpower
Discussion

Wednesday, May 15

1. Visual examinations and their significance
Discussion
2. Pre-employment psychologic screening of employees for job placement or reassignment
Discussion
3. Hearing problems and noise control
Discussion
4. Health interviewing methods
Discussion
5. The importance of a general physical examination, including the use of roentgenology in a pre-employment examination
Discussion
6. Medical screening and job placement of the handicapped
Discussion
7. Attendance Motivations
Discussion

Thursday, May 16

1. The significance of adequate medical records in industrial medical practice
Discussion
2. The general practitioner's letter to industry covering the condition of employees when they return to work or the G.P. and his relationship to industry
Discussion
3. The medical aspects of claims and insurance
Discussion
4. Rehabilitation
Discussion
5. The treatment of industrial workers presenting acute medical emergencies
Discussion
6. Drugs and biologicals—their use and abuse as they affect the industrial worker
Discussion

It is expected that a group of outstanding authorities will be assembled to present the program and participate in the discussions. It is believed that physicians in Maryland interested in cooperating or participating in the industrial development of the State by improving the quality of industrial medicine will find this symposium stimulating and informative.

ALUMNI ASSOCIATION SECTION

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DEAN'S LETTER

Dear Members of the Alumni and Friends:

Some confusion has arisen in regard to the relationship of the National Fund for Medical Education and the American Medical Education Foundation.

The National Fund for Medical Education is organized primarily by business executives as a foundation to obtain unrestricted gifts from industry and philanthropists to aid medical education.

The American Medical Education Foundation is a foundation under the auspices of the American Medical Association primarily organized to receive gifts from physicians, either unrestricted or designated, for a specific medical school.

Formerly the contributions from both foundations were combined and forwarded to the medical schools as one check.

During the past year the foundations were separated in their operation and giving, because the A.M.A. thought it could better represent the needs of medical schools to physicians than it was possible to do when combined with the National Fund for Medical Education.

Prior to the separation, the Ford Foundation had agreed with the National Fund for Medical Education to match unrestricted funds given to medical schools by a contribution of an additional 70% of all contributions up to the amount received

the previous year and a 100% match for all funds contributed above that previously experienced. With this provision, unrestricted funds contributed to A.M.E.F. would participate in Ford matching as long as A.M.E.F. remained united in its giving with the National Fund for Medical Education.

However, the A.M.A. decided to separate from the National Fund and thus became ineligible for Ford matching money. However, to make up for the loss of income from the Ford contribution, the A.M.A. contributed \$125,000 from its funds to the A.M.E.F. which represented approximately the amount that would have been derived from the Ford Fund.

This year we will receive your contributions and our share of the unrestricted funds and matching A.M.A. money from the A.M.E.F. We will also receive a contribution from the National Fund for Medical Education.

I am sure you would like to know how this money is being used. Last year \$15,600 was used to pay faculty salaries that could not be provided through the regular appropriation.

\$7,500 was used to initiate a much needed addition of experimental pathology to the instruction in pathology.

\$3,000 was used to purchase new equipment needed in our experimental studies.

\$2,000 is being used in faculty travel to scientific meetings to present papers and gain information vital in improving our teaching program.

These and other factors have led to a tripling of our research program during the past two years and to great improvement of the undergraduate and house officer education programs.

The average cost of undergraduate medical education per student per year in the United States is approximately \$3,648.00. The University of Maryland has about \$2,934.00 per student per year to conduct its educational program. That is \$600.00 less than the average provided for in the United States. We are trying to increase our State participation, but we need help. Funds contributed to A.M.E.F. are of great assistance and every dollar given comes to the medical schools. The A.M.A. absorbs all overhead.

Sincerely,

WILLIAM S. STONE, M.D., DEAN

IMPORTANT NOTICE

The Medical Alumni Association announces a get-together for Maryland alumni to be held on Wednesday, June 5, 1957, from 5:30 until 7:30 P.M. during the annual meeting of the American Medical Association which will take place in New York City.

The reunion will be held at the New York Coliseum, headquarters of the American Medical Association.

A committee headed by Dr. Joseph Nataro, Chairman, is in charge of arrangements.

All Maryland alumni are cordially invited to attend and further information may be obtained from the Medical Alumni Association or by directly contacting Dr. Joseph Nataro, 172 Littleton Avenue, Newark 3, New Jersey.

EDITORIAL

A living organization displays only the concerted strength and energies of its component parts; thus, the School of Medicine becomes not only a manifestation of the energies and confidence of its faculty but also of the enthusiasm and capacity of its students. Both student and faculty become a continuing entity, the student emerging as an alumnus after a four year formal curriculum.

These alumni are not lost members of the intellectual team but are rather a continuing pride of the faculty who assisted in the creation of the corpus alumni. Also, a common bond of interest extends between alumni, faculty and the institution from which they take pride in claiming a professional genesis.

Thus, both faculty and alumni should take mutual pride in the achievements of one another. To this end, editorially, the Bulletin invites all alumni in a spirit of cooperative interest (and not with bashful reluctance) to send to the editor items of interest concerning themselves, their professional achievements and the achievements of their immediate associates.

The Bulletin will welcome such correspondence and will display it with pride, this pride pointing to the cooperative and coordinate achievements of both faculty and alumni.

Correspondence should be sent directly to the Bulletin or to the medical editor.

ORDER COMMEMORATIVE ITEMS NOW
NOTICE

COMMEMORATIVE SESQUICENTENNIAL ITEMS ON
SALE BY WOMEN'S AUXILIARY BOARD



The items listed opposite are currently offered by the Women's Auxiliary Board of the University Hospital for sale during the Sesquicentennial Year.

Prices include the following.

Large ash tray	\$5.00
Small ash tray	\$1.25
Demi-tasse cup	\$2.50

All inquiries and orders should be addressed to Gift Shop, University Hospital.

FACULTY AND FRIENDS HONOR DR. ALBERT E. GOLDSTEIN

More than 200 friends and faculty associates of Dr. Albert E. Goldstein gathered in his honor at a testimonial dinner held in his honor at the Sheraton-Belvedere Hotel on February 14, 1957. Dr. John C. Krantz, Jr. served as toastmaster. Speakers included Dr. Benjamin S. Abeshouse and Rev. John R. T. Hedeman.

Dr. Goldstein was presented with a testimonial in recognition of his long association with the School of Medicine, his scientific achievements and the esteem in which his personal attributes were held by his fellow associates and colleagues.

DR. SHIPLEY RESIGNS BULLETIN POST

Dr. E. Roderick Shipley, for many years a very active member of the staff of the Bulletin, has recently tendered his resignation because of increased responsibilities in his practice and teaching in the School of Medicine.

Dr. Shipley has served the Bulletin well as editor in charge of book reviews.

EXCERPTA MEDICA LIFTS CURTAIN ON SOVIET MEDICINE

As a result of plans initiated by the U. S. Public Health Service arrangements have recently been completed with Excerpta Medica Foundation, 2 East 103rd Street, New York 29, New York, whereby for the first time in the history of medicine an extensive review of the Soviet medical literature in all areas of medicine will now be available to medical science in the United States.

The plan calls for the translation and publication of abstracts of Soviet medical literature, including reports of the work now being done in various cities throughout the U.S.S.R. Abstracts will be prepared by Soviet specialists most qualified to undertake the work. The material will then be edited and supervised by Excerpta Medica's own specialists and permanent Editorial Committee of thirty Soviet scientists appointed by the Excerpta Medica Foundation in cooperation with the Presidium of the Academy of Medical Sciences of the U.S.S.R. These abstracts will be supplemented by verbatim translations of abstracts of the Soviet literature in specially selected fields.

All abstracts will be published under the title of "Abstracts of Soviet Medicine". Additional inquiries should be referred to Excerpta Medica Foundation, 2 East 103rd Street, New York 29, New York.

ANNUAL PEDIATRIC SEMINAR HELD MARCH 31, 1957

As customary, the Department of Pediatrics of the School of Medicine held its annual pediatric seminar on Sunday, March 31, 1957. An all-day meeting was designed specifically as an instrument of postgraduate education. Prominent speakers presented the following program:

Recognition and Management of Pancreatic Deficiency—Dr. Harry Schwachman,
Assistant Professor of Pediatrics, The Children's Medical Center, Boston,
Massachusetts

Pediatric Surgical Emergencies—Dr. Harry C. Bishop, The Children's Hospital of
Philadelphia

Poisoning in Children—Dr. Edward Press, The American Public Health Association, Inc., New York, New York.

Problems of Staphylococcal Infections in Children—Dr. Erwin Neter, Associate Professor of Bacteriology, Children's Hospital, Buffalo, New York

The committee members arranging this program included Dr. William M. Seabold, Dr. Israel P. Meranski and Dr. Frederick J. Heldrich, Jr., Chairman.

MARYLAND SOCIETY FOR MEDICAL RESEARCH NEWS

NEW FILM ON MEDICAL EDUCATION ADDED TO SOCIETY'S FILM LIBRARY

A new film, a story of Medical Education in America entitled *Danger at the Source*, has recently been purchased and made available to its free loan library. The film was made in various medical schools and teaching hospitals under the auspices of the National Fund for Medical Education. A descriptive pamphlet of the film is available upon request to the Society's headquarters, 29 South Greene Street, Baltimore 1, Maryland.

MARYLAND SOCIETY FOR MEDICAL RESEARCH ADVISES THAT THE ANTI-VIVISECTIONISTS ARE AGAIN ACTIVE

Anti-vivisectionist Societies throughout the nation continue active and at present are considering the draft of a bill for submission to the next Congress ostensibly prohibiting the inter-state transport of animals for experimental purposes.

PHI DELTA EPSILON LECTURE

The annual lecture sponsored by the Phi Delta Epsilon Fraternity, held on March 22, 1957, featured Dr. Paul Hoch, Commissioner of Mental Hygiene of the State of New York. Dr. Hoch spoke on the topic "The Use and Abuse of Tranquilizing Drugs".

The lecture was held in Gordon Wilson Hall, University Hospital and has been an annual feature of the Phi Delta Epsilon Fraternity.

Obituaries

Dr. Emil Novak

1884-1957

On a warm sultry afternoon in the Spring of 1927, a group of third year students had gathered in the classroom for the first lecture and laboratory exercise in gynecologic pathology. The class was held in a rather untidy and crowded laboratory in the Pathology Building at the John Hopkins Hospital. Because of limited space the same course had to be repeated three times during the year. It was a popular course and each section was filled to the limit. On this particular afternoon the students were waiting for the instructor with only half-hearted enthusiasm for the weather, the short time that had elapsed since luncheon, and pre-occupation with plans for the nearing weekend were not conducive to alertness. Some students were chatting idly, some were adjusting their microscopes, and others seemed pre-occupied with nothingness.

Suddenly there appeared at the door a handsome, robust, graying man. At once the entire room came to mental attention. Without being announced everyone knew that Emil Novak had arrived. His very presence was electrifying and each moment that passed brought every student more and more under his hypnotic power. The class lasted three hours and the time passed in what seemed to be a matter of minutes. At the end of the period everyone was exhausted, but his brain was crammed with a well organized store of fresh facts.

This was my first introduction to Emil Novak, then a relatively young man. It became my good fortune to receive an internship in gynecology and to be kept on for 4 more years to become resident on the service. Dr. Novak was a potent force in my education and training each year; however, 1 of these years was spent in the gynecologic pathology laboratory and it was during this year that I came to know him closely, professionally as well as personally and socially. I learned how meticulous and exacting he could be. He would spend much time studying a section under the microscope, and when he made his diagnosis it was usually final. Rarely did he change his opinion, and even more rarely was he found to be incorrect in his judgment. His facility in reading and speaking many foreign languages made him a walking bibliography, and since much of our basic knowledge in those days came from research done in foreign lands he was forever keeping his associates abreast of research done there. His unfailing fairness was another of his attributes. I helped Dr. Novak do some research work which turned out to be important enough to warrant writing a report for publication. He was good enough to include my name in the title. Almost everyone who worked in the laboratory with him was stimulated to do some important work in which he collaborated. Also to know Emil Novak socially and as a fine family man was my privilege. In spite of days with every minute engaged in professional duties for 10 or 12 hours he frequently entertained his staff and was a gracious host. His family was an unusually closely knit one and he was the adored and unmistakable head of it.



It was my pleasure to see Dr. Novak the recipient of many professional honors in this country and abroad. No one was ever more deserving, and no one else could have accepted so many so graciously.

By fortunate coincidence my last contact with Emil Novak was at a meeting of the Maryland Obstetrical and Gynecological Society in December of 1956. He had been first president of the society in 1929, and was again elected president when it was re-organized in 1951. At the December meeting the society presented a portrait of its twice past president to the Baltimore Medical and Chirurgical Faculty where it will hang with the portraits of other great men in Maryland medicine. This was an appropriate last tribute to a man who had been a guiding influence in the professional life of almost every member present, and by a society which had been formed, and had prospered under his guidance. The great man who had nonchalantly ac-

cepted almost every honor in his field was visibly and warmly moved by this local tribute bestowed upon him by his own friends and confreres, and in the city where he had spent his entire life.

JOHN HERMAN LONG, M.D.

Dr. Edward Sooy Johnson

Dr. Edward Sooy Johnson passed away at the age of 70 on Christmas Eve at his home in Baltimore very suddenly sitting on a chair in his living room.

Dr. Johnson graduated from the University of Maryland School of Medicine in 1912. He interned and served as resident at St. Joseph's Hospital in Baltimore, at the termination of which he became a member of the staff of that hospital.

He was a member of the Baltimore City Medical Society, the Medical and Chirurgical Faculty of Maryland, the American Medical Association and the American College of Surgeons and was a founder member of the American Board of Surgery. He had wide hospital activities in many of the Baltimore hospitals including St. Joseph's, Mercy, Lutheran, Franklin Square, South Baltimore General, Church Home and University Hospitals. He served for many years as Associate Professor of Surgery at his Alma Mater.

Born in Snow Hill, Maryland, he was active in the Eastern Shore Society and was one of its past presidents. He served in the Medical Corps of the United States Army in France during World War I with Base Hospital Unit 48.

JOHN F. HOGAN, M.D.
P & S 1911

Dr. Caldwell Woodruff

Dr. Caldwell Woodruff, well known Linthicum, Maryland physician, died on September 22, 1956, of a heart attack at the age of 74. Dr. Woodruff had suffered an attack of coronary thrombosis in 1936 at which time he retired from the active practice of medicine.

Born in Charlotte, North Carolina on April 16, 1882, the son of George Egleston and Betty Caldwell Woodruff, he attended the Charlotte schools and later the University of North Carolina. He then entered the College of Physicians and Surgeons in Baltimore receiving his degree of doctor of medicine in 1911. Upon the completion of his internship at Mercy Hospital he entered the United States Public Health Service. Dr. Woodruff was a member of the National Guard and saw service on the Mexican Border.

At the outbreak of World War I he was commissioned a captain in the Medical Corps of the United States Army and served in France with the 29th Division. Following the war, he moved to Linthicum and engaged in the active practice of medicine until his retirement in 1936.

Dr. Woodruff was a former Chairman of the Anne Arundel County Sanitary Commission and in 1940 was appointed Chairman of the Glen Burnie Draft Board serving on the Board until January, 1955 both in Glen Burnie, Maryland and later in Annapolis.

He took a keen interest in genealogy having written many papers on the histories of families in North Carolina, South Carolina and Georgia.

He was a member of the Episcopal Church; the Glen Burnie Rotary Club; Glen Burnie Post 40, American Legion; Post 1, 29th Division Association; the Society of the Cincinnati; the Society of Colonial Wars, The Sons of the Revolution and the Sons of the American Revolution.

Dr. Woodruff is survived by his widow, the former Beatrice de Forest of New York City, one son, three daughters and seven grandchildren.

JOHN F. HOGAN, M.D.
Class of 1911, P & S

Dr. William J. Coleman

Dr. William J. Coleman, surgeon and former Superintendent of the University Hospital, died on November 25, 1956. He was 75 years old.

A native of England, Dr. Coleman first settled in Connecticut and later was graduated from the School of Medicine in the class of 1906. At the outbreak of World War I he served as Superintendent of the University Hospital. Later, active in the National Guard, he served with 115th Infantry overseas and was discharged from the army with the rank of colonel in 1919.

Returning to Baltimore he then began the practice of surgery and was active on the staff of the Maryland General Hospital.

Dr. John Vincent O'Connor

Dr. John V. O'Connor, P & S, class of 1911, died on September 14, 1956. He was 71.

Long a registered pharmacist in the state of Rhode Island, after his graduation from the College of Physicians and Surgeons he became a member of the staff of the Woonsocket Hospital and Mercy Hospital in Woonsocket, Rhode Island. He was a past president of the Woonsocket District Medical Society, a member of the Rhode Island Medical Society and the American Medical Association. He was known as one of the leading internists in that section of New England.

JOHN F. HOGAN, SR., M.D.
P & S 1911

Dr. John Dawson Sturgeon, Sr.

Dr. John D. Sturgeon, Sr., aged 102, one of the nation's oldest physicians and the oldest living graduate of the school of medicine, died at his home in Uniontown, Pennsylvania on February 15. (See Bulletin of the School of Medicine, University of Maryland, Vol. 39, October, 1954).

Dr. Howard Lester Zupnick

Dr. Howard L. Zupnick, class of 1932, and for many years active on the surgical staff of the School of Medicine, died at his home in Baltimore on February 15, 1957.



Dr. W. Houston Toulson, a long time friend of Dr. Pincoffs and Toastmaster presents him with a photograph of the Pincoffs Fellowship plaque which will be erected in Chemical Hall.

of Medicine, Dr. Walter D. Wise, Dr. William B. Kouwenhoven and Dr. Theodore E. Woodward, Dr. Pincoff's successor as Professor of Medicine.

A highlight of the dinner program was the presentation to Dr. Pincoffs of an honorable citizen award in the name of the City of Baltimore which was presented by the Hon. Thomas D'Alesandro, Jr., Mayor of Baltimore.

Testimonial Dinner

in honor of

Maurice C. Pincoffs, M.D., M.A.C.P.

in commemoration of his

*Thirty-five Years as Professor of Medicine
and Preventive Medicine*

and his eminent career as a

*Physician, Teacher, Investigator, Counselor,
and Medical Administrator*

at the

School of Medicine. University of Maryland



*The Sesquicentennial Year
of the
University of Maryland*

*May 31, 1957
Lord Baltimore Hotel*

MAURICE C. PINCOFFS, M.D., M.A.C.P.

Dr. Pincoffs, whom we honor this evening, has enjoyed a distinguished career in American Medicine. He is a most respected member of the medical profession in Maryland and throughout the United States is regarded as the present day Oslerian Physician.

Maurice Pincoffs received the Bachelor of Science degree from the University of Chicago in 1909. His degree of Medicine was awarded by the Johns Hopkins University School of Medicine in 1912. As a medical student



MAURICE C. PINCOFFS, M.D., M.A.C.P.

and later as a house officer first at the Presbyterian Hospital in Chicago and subsequently at the Baltimore City Hospitals from 1913-1915, Dr. Pincoffs displayed traits of excellence. His evaluation of patients was refreshingly thorough and his final analysis of a difficult clinical problem was always critical and precise. These natural characteristics were strengthened by his unusual ability to retain information gleaned from the medical literatures.

For his outstanding record during World War I, he was awarded the Distinguished Service Cross and the Croix de Guerre with Palm. One of his confreres, unable to attend the dinner this evening, recently expressed appropriately: "From our association in France those many years ago, I

retain a very high regard for his indomitable courage in his personal participation in the evacuation of our wounded from the battlefield, and for the high morale which he maintained among his subordinates."

The period of 1922 to 1954 when Maurice Pincoffs was Head of the Department of Medicine of the School of Medicine, University of Maryland, was one of intensive growth in American Medicine. He contributed his excellent qualities of leadership and mature abilities as a clinician and teacher into planting the seeds of thoroughness and the principles of caring for the patient as a whole in students and physicians training under him. Many of his former residents have gathered to pay him homage tonight. They continue to practice and teach the principles of quality which he has generously bequeathed. The many students of medicine who have had the privilege of association with the master have learned by his words but equally by emulating the principles which he practiced. To him a diagnosis has never been one of hasty judgment, but one of analysis designed for the particular individual problem at hand. Dr. Pincoffs has practiced "comprehensive medicine" long before the expression was coined. His students sense this and regard this attribute as one of his greatest. Were his good friend and former associate for many years, Dr. Arthur M. Shipley, with us this evening, he might say: "Pincoffs has an uncanny instinct for solving a difficult clinical problem; he will not stop until the answer is correct or as nearly so as is humanly possible."

During his long tenure, Dr. Pincoffs organized the curriculum within a busy Department of Medicine, engaged in the practice of medicine and contributed greatly to the progressive development of the Medical School and enhanced its traditions through his teachings, investigations, writings and particularly by his leadership and maturity of judgment as an organizer and medical statesman.

Much of his early career was devoted to investigations of the natural history of diseases, dealing in particular with physiologic phenomena related to the adrenal gland and hypertension, functional and structural abnormalities of the heart, disorders of the central nervous system, and clinical manifestations and treatment of infectious diseases, particularly Rocky Mountain spotted fever. He is the gifted author of more than a hundred significant papers, editorials and other medical publications.

It is difficult to express fitting tribute for his unselfish devotion, his depth of vision and his strength of character. Dr. Pincoffs' accomplishments are a matter of record and one may merely glance at his curriculum vitae and bibliography to comprehend the vastness of his labors. The important medical societies of the country are privileged to have him as a member. He is past president of the Maryland Medical and Chirurgical Faculty, the American Clinical and Climatological Association, and the American College of Physicians, a post attained by few. Under his editorship since 1933, the circulation of *The Annals of Internal Medicine* has increased from about 2,000 copies monthly to the number one position of all journals in Internal Medicine in North America, probably in the world, exceeding 21,500 copies per month.

During World War II, Dr. Pincoffs, in spite of his increasing years, held a high military post in the Pacific Theater of War, first as Commanding Officer of the 42nd General Hospital and later as Chief of Preventive Medicine. The presence of prominent members of the Armed Forces this evening attest to the esteem in which his contributions are valued. Following World War II, Dr. Pincoffs resumed his many academic responsibilities, yet he found time to provide patients with the same understanding and painstaking care so typical of the man. Since 1954, he has organized and fostered a new department devoted to the social and medical problems of the changing environment and focused attention on rehabilitation of the chronically ill.

The medical problems of Baltimore and Maryland have received his tireless attention. For many years he has been a senior consultant to the State and City Health Departments rendering counsel and assisting in community health matters with meticulous care and vision. Through his affiliation with the Maryland Medical and Chirurgical Faculty the profession and citizens of the State have profited by his judgment and advice. Dr. Pincoffs was made Chairman of the Committee on Medical Care of the Maryland State Planning Commission, a program which is a pioneer project of its kind in the United States.

Dr. Pincoffs is one of Baltimore's foremost medical teachers, practitioners, and philosophers, whose mind and labors have shaped and have been shaped by an era of almost ceaseless medical progress. We could not salute a more worthy disciple of Aesculapius.

Toastmaster

DR. W. HOUSTON TOULSON
Professor of Urology, Emeritus
School of Medicine, University of Maryland

Invocation

THE VERY REVEREND JOHN N. PEABODY
Dean and Rector of The Cathedral of Incarnation

Greetings

THE HONORABLE THOMAS D'ALESSANDRO, JR.
Mayor of the City of Baltimore

DR. WILSON H. ELKINS
President
University of Maryland

Speakers

DR. ALAN M. CHESNEY
Dean Emeritus, School of Medicine
The Johns Hopkins University

DR. WALTER D. WISE
Professor of Surgery, Emeritus
School of Medicine, University of Maryland

DR. THEODORE E. WOODWARD
Professor of Medicine
School of Medicine, University of Maryland

DR. WILLIAM B. KOUWENHOVEN
Professor of Electrical Engineering, Emeritus
The Johns Hopkins University

Presentation of Honors

Unveiling of Portrait

Resident physicians who served during Dr. Pincoffs' tenure as Physician-in-Chief of the University Hospital and as Professor and Head of the Department of Medicine, School of Medicine, from 1922-1954. (From 1942 to 1946 Dr. Pincoffs was on leave of absence for service in the Armed Forces during World War II).

UNIVERSITY HOSPITAL

1922-23	Dr. Leon Freedom
1923-24	Dr. Bricey M. Rhodes
1924-25	Dr. William S. Love
1925-26	Dr. Thomas A. Clawson
1926-27	Dr. Edgar R. Miller
1927-28	Dr. Frank F. Lusby
1928-29	Dr. Charles E. Gill
1929-30	Dr. Lewis P. Gundry
1930-31	Dr. Benjamin H. Kendall
1931-32	Dr. John H. Hornbaker
1933-35	Dr. H. Vernon Langeluttig
1935-37	Dr. Joseph H. Holmes
1937-38	Dr. John A. Myers
1938-39	Dr. Francis G. Dickey
1939-40	Dr. Edward F. Cotter
1940-41	Dr. John T. Atkins
1941-42	Dr. Samuel T. R. Revell, Jr.
1942-43	Dr. L. Harrell Pierce
1943-44	Dr. W. H. Townshend, Jr.
1944-45	Dr. M. Virginia Palmer
1945-46	Dr. Alvin H. Honigman
1946-47	Dr. H. Pearce MacCubbin
1946-47	Dr. James R. Karns
1947-48	Dr. Ernest G. Guy
1948-49	Dr. William T. Raby
1949-50	Dr. Robert E. Bauer
1950-51	Dr. W. Carl Ebeling, III
1951-52	Dr. John A. Hightower
1952-53	Dr. Francis J. Borges
1952-53	Dr. Kyle Y. Swisher
1953-54	Dr. Howard F. Raskin

MERCY HOSPITAL

1923-24	Dr. H. Raymond Peters
1924-25	Dr. Fred T. Kyper
1925-26	Dr. F. B. Dart*
1926-27	Dr. Thomas B. Turner
1927-28	Dr. J. Sheldon Eastland
1928-29	Dr. T. Nelson Carey
1929-30	Dr. David Tenner*
1930-32	Dr. Earl R. Chambers
1932-34	Dr. J. Howard Burns
1934-35	Dr. George H. Carr, Jr.
1935-36	Dr. Philip D. Flynn
1936-37	Dr. W. Grafton Hersperger
1937-38	Dr. William H. Grenzer
1938-39	Dr. John T. Atkins
1939-40	Dr. S. Edwin Muller
1940-41	Dr. Frederick J. Vollmer
1941-42	Dr. William H. Kammer, Jr.
1942-43	Dr. Donald J. Roop
1943-44	Dr. William S. Lowe*
1944-45	Dr. John R. Davis
1945-46	Dr. J. Emmett Queen
1946-47	Dr. Edward S. McCabe
1947-48	Dr. Richard A. Carey
1948-49	Dr. Joseph J. Bowen
1949-50	Dr. Joseph F. LiPira
1950-51	Dr. Thomas P. Connor
1951-52	Dr. Howard F. Raskin
1952-53	Dr. Charles R. Ireland
1953-54	Dr. E. Paul Coffay, Jr.

*Deceased

Menu

FRESH GRAPEFRUIT AND STRAWBERRY COCKTAIL SUPREME

HEARTS OF
CELERY

SALTED
ALMONDS

MIXED
OLIVES

CONSOMMÉ À LA BELLEVUE EN TASSE

CHEESE STRAWS

LOBSTER À LA NEWBURG

CHAMPAGNE

ROAST PRIME RIBS OF BEEF AU JUS

NEW BOILED POTATO
PARSLEY AND BUTTER

FRESH JUMBO ASPARAGUS
POLONAISE

CHEF'S SALAD

RUSSIAN AND ROQUEFORT CHEESE DRESSING

COUPE AU MARRON

PETIT FOURS

COFFEE

MINTS

Dinner and Celebration Committee

T. NELSON CAREY

J. SHELDON EASTLAND

JOHN C. KRANTZ, JR.

EPHRAIM T. LISANSKY

JAMES T. MARSH

WILLIAM T. RABY

HARRY M. ROBINSON, JR.

SAMUEL T. R. REVELL, JR.

GEORGE H. YEAGER

THEODORE E. WOODWARD, *Chairman*

DIVISION OF DERMATOLOGY

Dr. John F. Strahan, who has recently completed his residency training in dermatology at the School of Medicine, University of Maryland, has been certified for the practice of this specialty by the American Board of Dermatologists, and has opened offices at 1117 St. Paul Street in Baltimore.

Dr. Raymond C. V. Robinson, assistant professor of dermatology, has been named assistant chief of the dermatology clinic at the School of Medicine. In association with Dr. Harry M. Robinson, Jr. and Dr. John F. Strahan; Dr. Robinson has presented an exhibit entitled "Control of Emotional Pictures in Dermatology" at the recent meeting of the American Medical Association held in New York.

Dr. Harry M. Robinson, Jr., professor of dermatology and Dr. Francis A. Ellis, associate professor of dermatology, will attend the meeting of the Eleventh International Congress of Dermatology to be held in Stockholm July 31st-August 5th, 1957.

NEW LABORATORY PLANNED

At present, the Division of Dermatology plans to establish a new laboratory in the clinic which will be furnished with funds obtained by clinical investigation in the Division.

MEDICAL SCHOOL HOST TO AMERICAN ASSOCIATION
OF ANATOMISTS

The School of Medicine was host to the Seventieth Annual Session of the American Association of Anatomists held in Baltimore April 17-19, 1957. The General Chairman of the Committee was Dr. Frank H. J. Figge, Professor of Anatomy, who was assisted by members of his department and many members of the student body.

High lighting the program were a large number of scientific and technical exhibits as well as numerous scientific contributions which received national mention in the press and in scientific journals. "Old secret dissecting rooms" were reopened in the style of the early 19th century with students in participation, actually dissecting cadavers preserved in whiskey as was the custom then. The old spiral staircase in the northeast corner of the old medical building was reopened and used as a "secret" passageway to the hidden dissecting room. Other historic elements of the school were on display.

DR. WAGNER VISITS GEORGIA MEDICAL GROUP

Dr. John A. Wagner, Professor of Neuropathology, was a recent speaker at the meeting of the Richmond County Medical Society in Augusta, Georgia.

DR. FRANCIS BORGES ADDRESSES HIGH SCHOOL STUDENTS

Dr. Francis J. Borges, Associate in Medicine at the School of Medicine, recently spoke on "Medicine and the Career" at the Career Day program held at the Catonsville Junior High School on March 7.

DR. SAVAGE ACTIVE AT NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

At the Twentieth Annual Meeting of The New Orleans Graduate Medical Assembly held at the Municipal Auditorium, New Orleans, La., on March 11-14, 1957, Dr. John E. Savage, Class of 1932, and Assistant Professor of Obstetrics and Gynecology, was the speaker on obstetrics. He presented the following papers: "Vaginal Breech Delivery," "Lacerations of the Birth Canal," and "Hemorrhage of Late Pregnancy." Dr. Savage also read a paper entitled, "An Account of the Early History of Cesarean Section in the United States," before a meeting of The New Orleans Gynecological and Obstetrical Society.

DEPARTMENT OF MEDICINE NOTES

Miss Anne E. Rider, of the Department of Medicine, has been awarded the J. Howard Brown Memorial Award at Camp Detrick, Maryland. This award is given annually to the outstanding student bacteriologist in the State of Maryland. Miss Rider, a graduate of Notre Dame College of Maryland, was cited for her studies on the effect of ultraviolet radiation on the growth cycle of bacteria. Miss Rider is currently engaged in metabolic studies on Serotonin and is associated with the Division of Hypertension of the Department of Medicine.

MISS WYATT RETIRES

After 27 years of devoted service as operator of the central switchboard for The Baltimore Schools, Miss Lillian R. Wyatt retired on January 31, 1956. Miss Wyatt came to the University in 1930 as operator of the small manually operated switchboard controlling a relatively small number of telephones. During the intervening years she has witnessed the switchboard grow to a huge dial-controlled system handling nearly a thousand incoming and outgoing calls, thousands of inside calls, and scores of long distance calls every day. Miss Wyatt will be succeeded by Mrs. Vera Martin as Chief Operator.

Miss Wyatt will continue to live at her apartment at 713 Park Avenue, Baltimore. Her plans for the future include a trip to California and greater participation in local and civic activities. She also plans, if time permits, to gather material for a book of Reminiscences of The University of Maryland. Her many friends at The University of Maryland wish her continuing happiness in the years ahead and much success in all her activities.

MERCY HOSPITAL NEWS

Dr. Henry J. Marriott, author of the popular text "Practical Electrocardiography", has announced a second edition of his book which will appear in August, 1957.

Dr. J. Sheldon Eastland, a member of the Visiting Staff and Associate Professor of Medicine, was recently elected President of the Medical and Chirurgical Faculty of the State of Maryland.

RADIOLOGY COURSE APPROVED

The American Board of Radiology has announced the approval of the training program in radiology at Mercy Hospital for a two year course. The first and third year will be spent in residency at Mercy with the second year devoted to radiation therapy under the direction of Dr. Fernando Bloedorn at the University Hospital.

INTRODUCING NEW MEMBERS OF THE FACULTY

MARTIN HELRICH, M.D.

Dr. Helrich, recently appointed Professor and Chairman of the Department of Anesthesiology, received his B.S. at Dickinson College and his M.D. at the Univer-



Martin Helrich, M.D.

sity of Pennsylvania in 1946. He interned at the Atlantic City Hospital and served a residency and fellowship in Anesthesiology at the Bellevue Medical Center.

During his military service he was chief of Anesthesiology of the U. S. Army Hospital at Camp Polk, Louisiana. He was appointed Assistant Professor of Anesthesiology of the University of Pennsylvania Medical School.

Dr. Helrich has done extensive research in several fields of Anesthesiology including the distribution of intrathecal procaine, the effects of inhalation anesthesia on the circulation, and the respiratory effect of opiates and opiate antagonists. These investigations are reported in fifteen scientific papers.

He is a member of Phi Beta Kappa and Sigma Xi and a number of professional societies including the American Society of Anesthesiologists, American College of Anesthesiologists, American Board of Anesthesiology, and Association of University Anesthetists.

ROBERT E. BAUER, M.D.

Dr. Robert E. Bauer has recently returned to the University Hospital after serving with the Armed Forces and is presently Codirector of the Radioisotope Laboratory.



Robert E. Bauer, M.D.

Dr. Bauer received his Bachelors degree from Johns Hopkins University in 1943 and his M.D. at the University of Maryland in 1946.

He served his internship and residency at the University of Maryland and was chief resident in Medicine from 1949 to 1950. He held a fellowship at the Oak Ridge Institute of Nuclear Studies in 1950.

Dr. Bauer has been associated with the University of Maryland Medical School as Instructor and Assistant Professor of Medicine since 1950.

We welcome him back to our active faculty.

JEROME K. MERLIS, M.D.

Dr. Jerome K. Merlis has joined the faculty as Professor and Head of the Department of Neurophysiology and Director of the Department of Electroencephalography.



Jerome K. Merlis, M.D.

He was educated at the University of Louisville, receiving his B.S. in 1933, M.D. in 1937 and an M.S. in physiology in 1938.

Dr. Merlis was Seymour Coman Fellow in Physiology at the University of Chicago

in 1938, and the Commonwealth Fund Fellow in Neurophysiology at the Yale University, 1940-41.

Following his military service, he was instructor and Assistant Professor of Neurophysiology at the University of Louisville and then served as Instructor in Neurology at Harvard University, 1954-56.

He was certified by the American Board of Psychiatry and Neurology, and by the Board of Qualifications, American EEG Society.

He is a member of numerous professional societies, having served in a national executive capacity in the American EEG Society, American League Against Epilepsy and Eastern Association of EEG.

Dr. Merlis is currently editor of *Epilepsia*, and is the author of more than twenty-five articles in the field of neurophysiology. In his research he has contributed extensively to the understanding of the role of the motor cortex in myoclonus.

FACULTY AND MEMBERS OF DEPARTMENT OF OTOLARYNGOLOGY ACTIVE IN INTERNATIONAL CONGRESS

The Sixth International Congress of Otolaryngology was held in Baltimore on Saturday, May 11, 1957. Members of the committee in charge of arrangements included Dr. Thomas R. O'Rourke, Professor of Otolaryngology. Members of the Faculty participating in the program included Dr. Robert Buxton who spoke on "Salivary Gland Tumors" and Dr. Vernon E. Krah1 who spoke on "Anatomy of the Terminal Airways".

DR. HOCH PHI DELTA EPSILON LECTURER

Dr. Paul Hoch, Commissioner of Mental Hygiene of New York State, was the annual Phi Delta Epsilon lecturer. Dr. Hoch, who spoke on "The Use and Abuse of Tranquilizing Drugs" addressed the School of Medicine on March 22, 1957. His address was discussed by Dr. Jerome Frank, Professor of Psychiatry at the Johns Hopkins University and Dr. John C. Krantz, Jr., Professor of Pharmacology in the School of Medicine.

MEDICAL LIBRARY NOTES

The following persons gave books and journals to the library between February 1 and May 1, 1957:

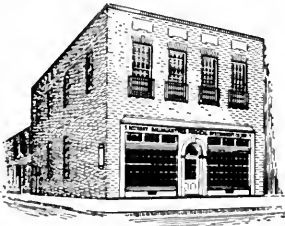
Dr. Tibor Benedek	Dr. Samuel Glick
Dr. C. S. Bluemel	Dr. Frank W. Hachtel
Dr. Louis V. Blum	Hynson, Westcott, and Dunning
Dr. J. Edmund Bradley	Dr. Arthur M. Kraut
Miss Pearl Chan	Mr. Harry M. Miller
In memory of	Mrs. William R. Quynn
Dr. Howard L. Zupnik	Dr. William S. Stone
Dr. A. Estin Comarr	U. S. Food and Drug Administration
Dr. Ernest I. Cornbrooks, Jr.	Dr. Charles L. Wisseman, Jr.

There is gratifying evidence that alumni in different parts of the country are following with interest the progress reports on the new library building. Excerpts follow from letters sent to the librarian.

Dr. Arthur M. Kraut of Newark, New Jersey (class of 1923) wrote: "I am anxiously awaiting the starting of the new library. . . . Will it be possible to plan for 'dedications' for different sections of the library—as memorials . . . and to have donations made for purchases, acquisitions, etc.? If that could be planned for, perhaps certain sums could be acquired—they need not be large—and a little 'elbow room' as far as money is concerned be allowed for such purposes as you may see fit."

From Concord, North Carolina, Dr. A. Frank Thompson, Jr. (class of 1940) wrote: "I am most interested in plans for a new Library and have followed the plans as set forth in the Medical School Bulletin. . . . I am a little disappointed that the interested alumni have not been asked to lend their support. I do think that many would be interested in providing some of the needed 'things' in the new library. . . to the extent at least of modest contributions."

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Baltimore 1, Maryland

Announcement

THE TENTH ANNUAL
DOCTOR JULIUS FRIEDENWALD
MEMORIAL LECTURE

Will Be Given By

Doctor Waltman Walters
of The Mayo Clinic.

on

THURSDAY, OCTOBER 17th, 1957

at the

UNIVERSITY OF MARYLAND, SCHOOL OF MEDICINE
CHEMICAL HALL—MAIN BUILDING

N.E. COR. LOMBARD AND GREEN STS. · BALTIMORE

Doctor Waltman Walters topic will be,
"THIRTY YEARS EXPERIENCE IN
THE TREATMENT OF BILIARY TRACT LESIONS".

ABSTRACTS

TOPICAL STEROID THERAPY IN THE MANAGEMENT OF OCCUPATIONAL DERMATOSES.*

Robinson, Harry M., Jr., Baltimore 1, Maryland.

Occupational dermatoses have been defined by various industrial accident commissions as "due to or aggravated by the individual's occupation." In recent years the introduction of resins, detergents, and other sensitizing or primary irritating materials into industry has added to the problem so that at present skin eruptions constitute 60 percent of all medical diseases reported to the compensation boards in the United States. In many instances it is not possible to prove or disprove the relationship of the dermatosis to the patient's occupation if the suspected agent is a primary irritant such as soap, a detergent or a volatile solvent. In such instances the Compensation Board issues a ruling in favor of the patient and the insurance company or the patient's employer must bear the expense of medical care and also reimburse the individual for time lost from work.

In the strict literal sense, the term "occupational dermatosis" is limited primarily to an eruption which has developed during the course of work for which the patient receives compensation. In recent years, as a result of the development of various household cleansing agents known as detergents, the incidence of primary irritation dermatitis and allergic contact dermatitis in housewives has increased to an alarming degree. Furniture polish, solvents and some cleansing agents have also been contributing factors.

Topical steroid therapy has proved to be of definite value in the management of atopic dermatitis, dermatitis venenata, seborrheic dermatitis, intertrigo, pruritus ani, pruritus vulvae, lichen simplex chronicus and eczematous eruptions of the hands (1-11). The introduction of topical steroid therapy for the treatment of eczematous eruptions has been a valuable asset in the management of some dermatoses attributed to occupations. In many instances local applications of steroids in suitable vehicles have accelerated the involution of lesions, or have so improved the condition that the patient may perform some gainful occupation while under treatment.

(To Be Published.)

STUDIES ON HUMAN INFECTION WITH *Pasteurella Tularensis*. I. Comparison of Streptomycin and Chloramphenicol in the Prophylaxis of Clinical Disease.†
McCrum, Fred R., Jr., Snyder, Merrill J. (By Invitation) and Woodward, Theodore E., Baltimore 1, Maryland.

Human volunteers have been infected by the intradermal inoculation of the Rector strain of *Pasteurella tularensis* for the purpose of investigating the pathogenesis, mechanism of immunity and the effect of antibiotics on tularemic infections in man. Variation of inocula from 50 to 50,000 mouse LD₅₀ has revealed that the minimal infective intradermal dose of the Rector strain for man is about 100 mouse LD₅₀.

* From the Department of Dermatology, School of Medicine, University of Maryland.

† From the Department of Medicine, School of Medicine, University of Maryland.

Streptomycin, when administered soon after inoculation of the viable bacteria, successfully eradicated the infection after five days of therapy. Clinically overt illness was fully suppressed, the local dermal lesion failed to develop and the agglutinin response was negligible when patients were given streptomycin prophylactically.

Chloramphenicol did not eradicate *P. tularensis* from the site of inoculation and, following suppression during the period of prophylaxis, clinically manifest illness characterized by fever, dermal lesion and bubo appeared. Agglutinins could be demonstrated only in patients who developed overt disease. This study in 35 volunteers suggests a difference in the mode of action of streptomycin and chloramphenicol in tularemic infection in man.

(To Be Published)

MAIN STEM EXTRASYSTOLES. ¶ § By Henry J. L. Marriott, B.M., B. Ch. (Oxon) Associate Professor of Medicine, University of Maryland School of Medicine; Chief, Electrocardiograph Department, Mercy Hospital and Samuel M. Bradley, M.D., Assistant Resident in Medicine, Mercy Hospital.

Extrasystoles arising in the main stem of the h bundle of His are generally regarded as very rare; only seven examples have been published since their original description by Lewis in 1911 and two of these fail to satisfy rigid criteria for diagnosis. Four further examples, encountered in a relatively small series of tracings, are here presented and it is concluded that such extrasystoles are not so much rare as they are overlooked.

AN ALARMING PRESSOR REACTION TO REGITINE*

The intravenous administration of Regitine is generally regarded as safe. In the course of a routine hypertensive work-up in a patient with severe essential hypertension, the intravenous injection of 5 mg. Regitine was followed by an alarming reaction consisting of marked rise in blood pressure from 270/128 to 300+/185, tachycardia to 156, pulsus alternans, profuse sweating and severe precordial pain. The possibility that a pressor substance had been injected by mistake was excluded.

THYROIDITIS: A REVIEW AND PRESENTATION OF FORTY PATHOLOGICALLY PROVED CASES OF CHRONIC THYROIDITIS. (Accepted for Publication by Southern Medical Journal—Dec. 1956) †‡

Although chronic thyroiditis is not considered a common disease, 40 proved cases were seen and studied at the University Hospital, Baltimore, Maryland during the

¶ This manuscript has been accepted for publication by Circulation.

§ From the Department of Medicine, School of Medicine, University of Maryland and the Mercy Hospital, Baltimore, Maryland.

* Henry J. L. Marriott, M.D., Associate Professor of Medicine, University of Maryland; Chief, Electrocardiograph Department, Mercy Hospital, Baltimore, Maryland. Accepted for publication in *Annals of Internal Medicine*.

† Yeager, George H., Workman, Joseph B., Holbrook, William M., and Patten, David H. From Departments of Surgery and Medicine, School of Medicine, University of Maryland, Baltimore, Maryland.

‡ Presented, in part, as the Chairman's Address, Section on Surgery, Golden Anniversary Meeting, Southern Medical Association, Washington, D. C., November 13, 1956.

four year period, 1952-56. Selection of patients required not only a positive pathologic diagnosis of chronic thyroiditis but the performance of at least two of the four more common laboratory indices of thyroid function, i.e., BMR, PBI, serum cholesterol, and radioactive iodine tracer test.

In general, the well documented features concerning chronic thyroiditis were present in the group studied, i.e., preponderance of middle aged white females, history of recent thyroid enlargement and a wide range of symptomatology. Hypometabolism was indicated to be present in 80 per cent of patients if laboratory tests of thyroid function were considered alone.

Scintigraphy, the mapping of functioning areas of the thyroid gland using tracer doses of radioiodine and a specially designed scintillation counter was performed preoperatively in 50 per cent of the patients. Eighty per cent of the scintigrams disclosed areas of decreased function in keeping with hypofunctioning thyroid tissue.

Pathologically, 37 (94 per cent) of the patients were classed as Hashimoto's disease and 3 (6 per cent) as Riedel's Struma. In 4 patients (10 per cent) thyroid carcinoma and Hashimoto's disease were found to co-exist within the same gland. For this reason, bilateral subtotal thyroidectomy with adequate exposure and biopsy of suspicious areas within the gland, at the time of surgery, would appear to be the therapy of choice in chronic thyroiditis.

OBTAIN YOUR COMMEMORATIVE MEDAL NOW



The Medical Alumni Association can still offer a few of the fine, registered medals struck in commemoration of the 150th Anniversary of the School of Medicine. These may be obtained by writing the Medical Alumni Association, Lombard and Greene Streets, Baltimore 1, Maryland. Price is as follows:

Bronze—\$3.00 plus \$.06 Maryland State Sales Tax (where applicable)

All medals will be sent postpaid upon receipt of remittance. Fifty cents should be added to the above prices if the purchaser desires the order to be registered or insured.

POST GRADUATE COMMITTEE SECTION

POST GRADUATE COMMITTEE, SCHOOL OF MEDICINE

HOWARD M. BUBERT, M.D., *Chairman and Director*

Elizabeth Carroll, *Executive Secretary*

Post Graduate Office: Room 201

Old Medical Building, Lombard and Greene Streets

Baltimore 1, Maryland

THE CARIBBEAN CRUISE

The Postgraduate Committee has arranged for a medical cruise to the Caribbean in the fall of 1957. The cruise ship will sail from Wilmington, North Carolina, on Saturday, November 30th and return to Wilmington the following Friday, December 6th.

The American Academy of General Practice will allow 15 hours of Category I Credit for the lectures that will be given during the cruise.

The ship will stop over for one day at Nassau and one day at Havana. There will be the usual attractions of shipboard life and it is hoped that you will keep the cruise in mind when arranging for your yearly vacation. Many of your friends will be on board. Why not join them? For further information, please contact Mrs. Carroll in the Postgraduate Office.

TV-MID

TV-MID, The University's medical program over WBAL-TV, will begin its seventh consecutive year of telecasting in the fall. Please watch your newspapers for the date and time.

BASIC SCIENCE COURSE

The Committee is happy to announce that the Basic Science Course this year has been unusually well attended. It is very gratifying to the Committee that so many came so far for such an extended period of time.

CALENDAR OF EVENTS

Recognizing the need for a regular listing of special activities of the departments of both the Hospital and the School of Medicine, as well as noting principal routine schedules in the Hospital and School, the Postgraduate Committee inaugurated the publishing of a Calendar of Events. With but few brief interruptions because of circumstances beyond the control of the Committee, the Calendar has been published weekly since March 4, 1956. That the publication has been worth while is attested to by the fact that the circulation has grown from about 110 copies when first distributed to approximately 215 copies. Hardly a week goes by without requests for addi-

tional copies by men who find the material useful—whether to attend a special lecture in their particular field or to keep informed as to what is going on on the Baltimore Campus.

The Committee deeply appreciates the cooperation of the various departments and especially their hard-pressed secretaries, for sending us material in time for publication dead-line. Unhappily for all concerned, many times material is received too late. However, when there is insufficient time to mail the material to the Postgraduate Committee Office, it may be telephoned by calling Plaza 2-1100, Extension 259, and the information will receive the special attention of the secretary in charge of the publication.

Single Copies of Bulletin are Available

Back numbers of many volumes of the Bulletin of the School of Medicine are available.

An inquiry will be promptly acknowledged. Copies in stock can be purchased at \$2.00 per volume (single copies \$.50) as long as they last. All issues postpaid.

Address

Bulletin of the School of Medicine
University of Maryland
Lombard & Greene Sts.
Baltimore 1, Maryland

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DEAN'S LETTER

Dear Members of the Alumni and Friends of the Medical School:

During the past year I have indicated to you that the faculty has been working to revise the By-laws of the School of Medicine. The new By-laws developed by the faculty of the School of Medicine have now been formally approved by the University Senate and were put into effect on November 21, 1956.

The new By-laws provide for a more democratic form of faculty government. There is a more positive provision for representation from the part-time faculty in the Faculty Board. The Faculty Board has a greater role in determining medical school policy. The By-laws of the School of Medicine are in keeping with the stipulations of the University By-laws and faculty government. Lines of administration and policy are more clearly defined.

In a similar manner, student government has been organized by the students and the relationships with the administration and faculty clearly defined. Under the Associate Dean for Student Affairs, Dr. Dietrich C. Smith and the Faculty Student Advisory Council, the students are taking an active part in University affairs as well as developing and regulating student activities. It is expected that as a result of student and faculty action, the honor system will be initiated in the medical school in the very near future.

The faculty graduate committee has been reconstituted under the chairmanship of Dr. Frederick P. Ferguson, who also represents the medical school on the University's graduate council. The Graduate Committee will attempt to improve the opportunities for graduate work in the medical school. It is expected that graduate work

will not only be provided in the medical basic sciences as in the past, but will also include work in the clinical fields as well. With the research programs now under way in Pediatrics, Internal Medicine, Psychiatry, Surgery, Radiology and Anesthesiology, there are many opportunities for graduate work in clinical medicine. It is expected that following graduation, increasing numbers of medical students will choose graduate work in preparation for research and teaching careers in medicine.

The Medical School's research program is growing rapidly. We find that many of our students are displaying a real interest in research. They are being encouraged by the faculty and we now have undergraduates in medicine doing research by participating in faculty research projects and short term part-time projects of their own during the summer and in unscheduled time.

At the meeting of the Association of American Medical Colleges during November, 1956, it was brought out that if American medicine is to meet the needs of the United States population that by 1970 there would be a need for 31 additional medical schools or their equivalent through enlarging the enrollment of existing schools.

The School of Medicine is in a phase of development and growth. There is great need for better understanding and support for our needs for a better and larger physical plant so that primary teaching demonstrations of clinical medicine can be carried out in our own hospitals and clinics under adequate faculty supervision and direction. With the great amount of information now available in medicine, basic teaching should not be handicapped by losing one to two hours daily due to the present necessity of students traveling to several hospitals for demonstrations of clinical problems and to gain experience covering the various specialty fields in medicine.

Sincerely,

WILLIAM S. STONE, M.D., DEAN

TO THE BI-CENTENNIAL OF THE SCHOOL OF MEDICINE— A CHALLENGE

As the Medical Alumni Association celebrates the recurring reunions of the graduating classes, it has been repeatedly shown that 15 per cent of the alumni of the School of Medicine are still in active practice 50 years after graduation. The following pictures include approximately 20 doctors who will be present for the bi-centennial celebration (we hope) which will be held presumably on June 6, 2007.

The sesquicentennial class of 1957 has kindly posed for its picture and recorded itself as being unanimously in favor of complete participation in the bi-centennial celebration. However, none of the class has indicated the degree to which he will challenge the inevitable 20 per cent survival figure which has prevailed in the past.

As a challenge to members of the class of 1957 and as an exercise in far reaching vision and in prediction of things to come, it is suggested that those members who will be present on the campus June 6, 2007, so indicate. May improved research and progressive discoveries in medicine; a lengthening life span and good health operate to the extent that many more of the class of 1957 shall be present at their 50 year reunion than has been possible in the past.



1st row, l to r—Lee I Schochet, William F. Kennedy, Jr., Leonard M. Zulla, Richard K. Ho, Ray A. Wilson, Sebastian J. Gallo, John H. Hammann, Jr., Arthur D. Ericsson, William J. Rappoport, John V. Conway.

2nd row, l to r—Mary Louise Furth, Loretia Ann Gilmore, Milton L. Engnoth, Max J. Spencer, Marvin A. Feldstein, Carl Jelenko, III, Frederick Moonau, Anthony F. Hammond, Jr., Paul A. Mullan, Verne E. Gilbert, Virginia E. Young

3rd row, l to r—Walter M. Shaw, Donald L. Bucy, Richard C. Reba, Stuart J. Abrahams, Nicholas A. Garcia, III, Harold J. Hettelman, Herbert L. Kronthal.

Absent from photographs: Bernard N. Bathon, James K. Bouzoukis, Donald L. Bucy, Mary Cecilia Burchell, Sidney I. Lerner, Marion C. Restivo, George W. Rever, Leroy Shear, Landon C. Stout, Jr.



1st row, l to r Donald W. Kaurigh, Francis J. Maccek, Jr., Peter Paul Lynch, James G. Stringham, John J. Raleigh, Theodore T. Niznik, Jr., Harvey R. Butt, Jr., Jose G. Quimones Segarra, Herbert H. Naslor, Emil E. Aftandlian, Warren S. Poland, Nicholas A. Garcia, III.
 2nd row, l to r David P. Largey, James P. Laster, Harvey I. Wilner, Edwin L. Kahan, Lynn B. Robinson, Howard S. Siegel, Ronald R. Berger, William A. Simmons, Marvin S. Arons, Paul Bornmel, Louis L. Randall.
 3rd row, l to r Ronald Ross Cameron, George P. Shaw, Kenneth F. Spence, Jr., Morton W. Shapiro, Herbert E. Brooks.



1st row, l to r—Robert O. Hickman, Nevins W. Todd, Jr., Donald W. Gauthier, Joseph C. Laughlin, Charles J. Allen, Vincent J. Fiocco, Paul K. Hanna
 shiro, Marvin Cohen, Richard L. Levin, Allan S. Garber, Selma G. Balco, Charles M. Henderson.
 2nd row, l to r—John T. Bulkeley, Charles R. Oppenard, Frederick W. Plugg, IV, Fred H. Mehllhop, Maitland G. Spencer, Morton Schmukler, Franklin
 D. Schwartz, Leonard L. Kogan, Eldon B. Hamblin, James L. Beelby, George A. Lentz, Jr., Joseph O. Dean.
 3rd row, l to r—Michael S. Trupp, Norman P. Jones, Donald T. Lansinger, Francisco E. Oliveras-Armstrong, Robert A. Carlin, Wilfred F. Holdrege, Jr.

DR. THOMAS B. TURNER NAMED HOPKINS DEAN

ALUMNUS OF CLASS OF 1925 TO ASSUME IMPORTANT ADMINISTRATIVE POST

Dr. Thomas B. Turner, a member of the class of 1925, and currently Professor of Microbiology at the School of Hygiene and Public Health of the Johns Hopkins University, has recently been named Dean of the Johns Hopkins School of Medicine in an appointment announced by Dr. Milton S. Eisenhower.



DR. THOMAS B. TURNER

Dr. Turner, who will assume office on July 1, will succeed Dr. Philip Bard, the present Dean and former Professor of Physiology. Dr. Bard will return to full time teaching in physiology.

A graduate of St. John's College in Annapolis, and of the University of Maryland School of Medicine in 1925, Dr. Turner served his internship at the Hospital for Women of Maryland and was later resident in medicine at Mercy Hospital. This was followed by a two year Fellowship in Medicine at the Johns Hopkins Hospital from 1927 through 1929. He was then successively instructor and associate in medicine until 1932 when he became a member of the staff of the Rockefeller Foundation's International Health Division. Dr. Turner has long been identified with the National Foundation for Infantile Paralysis, World Health Organization and many other national committees.

MARYLAND ALUMNI MEET DURING NORTH CAROLINA STATE
MEDICAL SOCIETY MEETING

On Monday evening, May 6, 1957, a group of Maryland alumni and their ladies assembled at the Battery Park Hotel, Asheville, North Carolina for cocktails and dinner. The Medical Society of the State of North Carolina being then and there in session, provided the opportunity for the get-together.

Dr. William S. Stone, Dean of the School of Medicine and Dr. William H. Triplett, Director of the Medical Alumni Association were guests. Dr. Stone gave the group

a brief resume of events and developments, both accomplished and projected on the campus at Lombard and Greene.

At the conclusion of the dinner, a short business meeting was held and Dr. Leon H. Feldman, class of 1934, elected Chairman of a committee to plan for a similar assembly during the State meeting in 1958.

Dr. J. B. Anderson, class of 1935, deserves a solid vote of thanks for his services as Chairman in arranging and developing such an enjoyable program.

The following alumni and their ladies attended the dinner: Dr. and Mrs. J. B. Anderson, Asheville; Dr. and Mrs. H. E. Barnes, Hickory; Dr. A. M. Diggs, Huntersville; Dr. and Mrs. William N. Corpening, Granite Falls; Dr. and Mrs. O. D. Evans, Jr., Charlotte; Dr. and Mrs. Leon H. Feldman, Asheville; Dr. Albert G. Hahn, Hickory; Dr. and Mrs. Henderson Irwin, Eureka; Dr. Joseph C. Knox, Wilmington; Dr. and Mrs. Joseph F. McGowan; Dr. Frank S. Parrott, Salisbury; Dr. James S. Phelps, Jr., Troy; Dr. F. G. Prather and Mrs. Armentrout, Asheville; Dr. William T. Raby, Charlotte; Dr. J. T. Sutton, Scotland Nec; Dr. and Mrs. J. Paul Young, Asheville; Dr. Ben Gold, Shelby; Dr. Weldon Chandler, Weaverville; Dr. William S. Stone and Dr. William H. Triplett of Baltimore.

DR. SCHMALE HONORED

Dr. Arthur H. Schmale, Jr., Class of 1951 and Instructor in Psychiatry and Medicine, at the University of Rochester, has recently been awarded a John and Mary R. Markle Foundation grant for a period of 5 years. He is one of 25 Markle Scholars in Medical Science chosen from 57 candidates nominated by medical school deans in the United States and Canada, each of whom presented a five-year program for intellectual and research development.

The purpose of the Markle program is to aid young medical school faculty members seeking careers in teaching and research and to relieve the shortage of teachers in medical schools as well as to strengthen their faculties by encouraging young scientists to remain in academic medicine. The program was begun 10 years ago and during its development has given grants totaling over \$6,000,000 to some 206 doctors in some 74 medical schools throughout the United States and Canada.

AN OLD ALUMNUS WRITES

1042 Malaga Ave.
Coral Gables, Fla.
May 11, 1957

University of Maryland Medical School
Alumni Department
Dear Sirs:

I regret that I am unable to attend the meetings of the Alumni Association and the banquet at the Lord Baltimore Hotel on June 6, 1957.

Very Best for the Great and Old Medical School.

Sincerely,

EUGENE H. MULLAN, M.D.
1903

ITEMS

Dr. Albert B. Kump, class of 1938, was honored by the Cumberland County Medical Society of the State of New Jersey at a reception held on Sunday, April 28, 1957, at the Haddon Hall Hotel in Atlantic City.

Dr. I. Phillips Frohman, class of 1937, has written an article entitled "Are Physicians Educated?". This has been published in the Oklahoma State Medical Association Journal, March 1957. In a very well written and concise article Dr. Frohman makes a plea for continued, broad education in the humanities as a prerequisite of being a good doctor and a good citizen.

Dr. W. Kenneth Mansfield, class of 1936, has recently announced the removal of his office for the practice of obstetrics and gynecology from 44 West Biddle Street to 2 East Read Street in Baltimore.

Dr. Henry F. Ullrich, class of 1929, has announced the association of Dr. John E. Carroll, Jr., class of 1952, in the practice of orthopedic surgery with offices at 715 Park Avenue, in Baltimore.

Dr. H. Elias Diamond, class of 1926, took part in a panel discussion on atomic dermatitis at the Academy of Allergy meeting (Post Graduate Course) in Los Angeles, California on February 3, 1957.

Three Baltimore doctors, **Dr. Herman Seidel**, P & S, class of 1910, **Dr. Benjamin Kader**, class of 1910, and **Dr. Joseph Kemler**, class of 1907, were given the 50 year award for membership in the Phi Delta Epsilon National Medical Fraternity. The occasion was a dinner at the Woodholme Club sponsored by the 4th District Conclave of Baltimore, Washington and Richmond Schools. The toastmaster was **Dr. Harry Cohen**, President of the Baltimore Chapter of the Fraternity. Three of the past presidents, all graduates of the University of Maryland School of Medicine were present, **Drs. Israel Zinberg**, **David Silberman** and **Shipley Glick**. Dr. Seidel, who visited Israel in 1955, was instrumental in founding the Herman Seidel Medical Center at Yaffa, Israel.

DR. THUSS APPOINTED TO IMPORTANT MEDICAL POST

Dr. William G. Thuss, Jr., class of 1948, has recently been appointed the first associate professor of industrial medicine in the Department of Preventive Medicine and Public Health, University of Alabama Medical College.

A native of Birmingham, Alabama, Dr. Thuss received the Doctor of Science degree in industrial medicine from the University of Cincinnati in 1956. He is also medical director of Hayes Aircraft Corporation in Birmingham and is in practice with the Thuss Clinic also of that city.

ITEMS

Dr. Herbert Berger, class of 1932, and President of the Blood Bank Association of New York State addressed the California Blood Bank System of the California Medical Association in San Francisco on February 23, 1957. Dr. Berger spoke on "The Role of State Medical Associations in Blood Banking".

Dr. Klaus W. Berblinger of the Department of Psychiatry has announced the opening of his office for the practice of psychiatry at the Psychiatric Institute, University Hospital, Baltimore.

Dr. Robert C. Douglass, class of 1952, was recently awarded the degree of Master of Science in Internal Medicine from Wayne University College of Medicine in Detroit. Dr. Douglass has begun the practice of internal medicine with offices at 704 Medical Arts Bldg., 13700 Woodward Avenue in Detroit. Dr. Douglass also serves as instructor in internal medicine at Wayne University College of Medicine.

Dr. Frederick R. Simmons, class of 1950, who has recently returned from duty in the United States Air Force, has entered the practice of pediatrics at 135 Broadway, Daytona Beach, Florida.

Dr. Eugene S. Bereston, class of 1937, has been named consultant for the 1957 edition of *New and Non-official Remedies* published by the Council on Pharmacy and Chemistry of the American Medical Association.

Dr. George H. Wall, class of 1954, is currently serving in the United States Navy at the United States Naval Hospital, Portsmouth, Virginia.

Dr. Raymond H. Kaufman, class of 1948, has announced the opening of his office for the practice of obstetrics and gynecology at 1319 Austin Street, Houston, Texas.

Dr. John F. Hogan, Sr., class of 1911, P & S and **Dr. John F. Hogan, Jr.**, class of 1947, have announced the removal of their offices to 2 East Read Street, Baltimore 2, Maryland for the practice of urology. Dr. John F. Hogan, Jr. has recently been certified by the American Board of Urology.

Dr. Elton Resnick, class of 1937, is currently President of the Delaware Chapter of the American Academy of General Practice.

Dr. Frederic R. Simmons, class of 1950, has recently been discharged from the United States Air Force and has opened offices at 135 Broadway, Daytona Beach, Florida. Dr. Simmons is engaged in the practice of pediatrics.

SPECIAL NOTICE

Dear Members of the Alumni:

Your contributions to the National Fund for Medical Education are of great assistance in bringing about improvement in the Medical School. Contributions made this year (1956) are particularly significant because: 1. They are matched by the Ford Foundation in the amount of 70 per cent if the contribution is the same as last year, and 100 per cent if they exceed last year's gifts. 2. In the process of reorganizing the Medical School there are many urgent needs that cannot be obtained under the State appropriations allowed for the medical school. This must not be construed to mean we are not getting State support for our requests. We have received very reasonable consideration, but our needs are many and great and we must try to progress more rapidly than can be depended upon by State appropriations alone.

We urge you to support the National Fund for Medical Education by gifts to them earmarked for the University of Maryland, School of Medicine.

Gifts from Alumni to the National Fund for Medical Education are particularly significant in that industry uses them as a criteria of the significance doctors attribute to the needs for increased support of medical education and gage their contributions to medical education accordingly.

Sincerely,

WILLIAM S. STONE, M.D., Dean

OBITUARIES

Dr. Edward Milton Smith, Jr.

Dr. Edward Milton Smith, Jr., class of 1946, and a commander in the United States Medical Corps, was killed in an automobile accident on May 14, 1957. He was active in the field of Preventive Medicine and Hygiene, having graduated from the Johns Hopkins University School of Hygiene and Public Health. During his career in the United States Navy he had been assigned to the Bureau of Medicine and Surgery in Washington and also had been assigned to the Portsmouth, Virginia, Coco Solo, Canal Zone, and St. Albans, New York naval hospitals. Dr. Smith was the son of Mr. and Mrs. E. Milton Smith of Baltimore.

Erasmus H. Kloman

Dr. Erasmus H. Kloman, class of 1910, and long prominent in gynecologic circles in the city of Baltimore, died suddenly at his home on April 29, 1957, of acute coronary thrombosis.

A man of wide interests, Dr. Kloman was active in organized medicine as well as in his specialty, being both President and Secretary-Treasurer of the Medical and Chirurgical Faculty and for many years a member of the Maryland State Board of Medical Examiners.

A native of Warrenton, Virginia, he was first graduated from the University of Pennsylvania as a pharmacist and practiced pharmacy in Greenburg, Pennsylvania. He then began his undergraduate studies at the University of North Carolina. Following his graduation from the University of Maryland School of Medicine, he interned at the University Hospital and then entered private practice.

At the outbreak of the first World War, Dr. Kloman joined the first Maryland Field Hospital as a first lieutenant. He was later attached to 116th Field Hospital.

Dr. Kloman was active in many civil and fraternal organizations.

Dr. Richard Joseph Kemp

Dr. Richard J. Kemp, class of 1921, died on May 2, 1957 at the Hospital of the National Institutes of Health following a protracted illness.

Following his graduation from medical school he served his rotating internship at the University Hospital and later entered the specialty of otolaryngology. A native of Woodstock, Maryland and a veteran of World War I, Dr. Kemp for many years was interested in the Metropolitan Police Boy's Club and was honored by the Washington Metropolitan Police who bestowed upon him the gold badge of Inspector in 1938.

Dr. Frank J. Schwartz

Dr. Frank J. Schwartz, member of the class of 1907, and a prominent physician of Spring Valley (near Nyack, New York) died suddenly at his home on April 22, 1957.

Following his graduation he began practice in Spring Valley. During his long career he served actively as village trustee and acting mayor. On June 18, 1956, a huge testimonial dinner was given Dr. Schwartz in honor of his long and brilliant service to his community.

He was past president of the Rockland County Medical Society and a member of many other civic organizations.

OBITUARIES

Allen, Wilmot B., New York City; B.M.C., class of 1898; aged 81; died, October 12, 1956, of ruptured abdominal aortic aneurysm.

Becker, Leo Vitus, Paterson, N. J.; B.M.C., class of 1906; aged 78; died, October 23, 1956.

Cross, Earl William, Tarentum, Pa.; P & S, class of 1908; aged 69; died, September 26, 1956.

Disbrow, G. Ward, Owensboro, Ky.; class of 1913; aged 66; served during World War I; died, July 22, 1956.

Feifer, Anthony Michael, Providence, R. I.; B.M.C., class of 1911; aged 70; died, October 27, 1956, of hypertension and heart disease.

Fisher, Charles Thompson, Salisbury, Md.; class of 1901; aged 77; died, September 19, 1956, of heart disease.

Golley, Kyle Wood, Baltimore, Md.; class of 1921; aged 59; died, September 6, 1956, of cerebral hemorrhage.

Greengrass, Jacob J., Paterson, N. J.; class of 1911; aged 69; served during World War I; died, October 6, 1956, of coronary thrombosis.

Haynes, James W. Dorsey, Mathews, Va.; class of 1889; aged 88; died, October 23, 1956, of aplastic anemia.

Heath, J. Mott, Greenport, N. Y.; P & S, class of 1913; aged 78; died, September 20, 1956, of arteriosclerosis.

Hunter, Johnson Sherman, Jackson, O.; P & S, class of 1894; aged 91; served during World War I; died, October 18, 1956, of arteriosclerosis.

Jones, Edwin Murray, Fellsmere, Fla.; B.M.C., class of 1910; aged 70; died, August 13, 1956, of gastrointestinal hemorrhage and arteriosclerotic cardiovascular disease.

Katzoff, Manuel, Norfolk, Va.; B.M.C., class of 1906; aged 71; died, August 14, 1956, of cancer of the stomach.

Lechner, Sidney Israel, Yonkers, N. Y.; class of 1932; aged 50; served during World War I; died, October 23, 1956, of acute myocardial infarction and peripheral vascular disease.

Massenburg, George Yellott, Macon, Ga.; class of 1911; aged 68; served during World War I; died, September 1, 1956, of embolus to the coronary artery with heart failure and acute bacterial endocarditis.

Meyers, Lloyd R., Cumberland, Md; class of 1915; aged 65, died, August 11, 1956, of coronary thrombosis.

Nichols, Elijah E., Pikesville, Md.; class of 1911; aged 70; died, April 6, 1956, of hypertensive arteriosclerotic heart disease.

O'Connor, John Vincent, Woonsocket, R. I.; P & S, class of 1911; aged 71; died, September 14, 1956, of arteriosclerosis and myocardial infarction.

Patterson, Frank, Tyrone, Pa.; B.M.C., class of 1902; aged 78; died, July 19, 1956.

Smink, A. Clarence, Towson, Md.; class of 1896; aged 80; died, October 31, 1956, of cerebral hemorrhage.

Steele, Guy, Cambridge, Md.; class of 1897, aged 95; died, October 12, 1956, of complications following fracture of the hip.

Thurston, Asa, Taylorsville, N. C.; class of 1909; aged 73; died, August 24, 1956, of arteriosclerosis.

Trainor, Joseph Aloysius, Cambridge, Mass.; P & S, class of 1905; aged 80; died, July 13, 1956.

Trippett, Lemuel Harrison, Jr., Amigo, W. Va.; class of 1918; aged 60; died, September 6, 1956, of coronary occlusion.

MEDICAL SCHOOL SECTION

SCHOOL OFFICIALLY ACKNOWLEDGES A.M.E.F. GIFTS

DR. STONE COMMENTS ON EXCELLENT ALUMNI SUPPORT

Contributions to the American Medical Education Foundation earmarked for the University of Maryland totalled more than \$42,000, some \$4,662 of which represented gifts from alumni. The highly successful campaign conducted in behalf of much needed improvements in medical education has thus again closed a very satisfactory year. In a letter, commenting on the benefits received from the Fund in the academic year 1956-57, Dr. Stone transmitted to the alumni the following letter.

Dear Members of the Alumni,

Gifts to the American Education Foundation have been of great assistance to the School of Medicine during the past year. For the year 1956, we received \$11,557.75 from the fund of which \$4,662.75 represented gifts from Alumni. One hundred and sixty nine individuals contributed to the fund. The remainder of the fund received from A.M.E.F. represented matching funds from the A.M.A., gifts from the Woman's Auxiliaries and undesignated gifts.

With the retirement of Dr. Hugh Spencer as Professor of Pathology and the appointment of Dr. Harlan I. Firminger to succeed him, it has been necessary to completely remodel and re-equip the Department of Pathology. A formal residency program in Pathology is now being offered and students are participating in experimental pathology as well as receiving the general background previously presented. A substantial research program is being started involving tissue cultures in the study of cancer. The Autopsy service is being completely revised and a greatly improved teaching program of correlative pathology initiated. All of these changes involve costs that could not be completely foreseen in the budget. The A.M.E.F. contributions have made it possible to finance many of these additions until we could include them in the budget.

By making contributions to A.M.E.F., you can have a real influence on the development and improvement of your medical school. A.M.E.F. overhead charges are paid by the A.M.A. and every dollar given by you if earmarked for the University of Maryland, School of Medicine, will come to the medical school. In addition, the contributions of the M.D.'s are carefully watched by industry as an indication of the needs of medical schools for support. During 1956, industry contributed through the National Fund for Medical Education \$39,050 to the University of Maryland, School of Medicine.

Help us to progress, give to the American Medical Education Foundation.

The University of Maryland School of Medicine does hereby acknowledge with thanks the interest manifested by the donors whose names appear on the following pages.

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 Walter Bailey—Wilmington, Del. 1940
 Baltimore City Medical Society (Womens Auxiliary)
 Bruce Barnes—Seaford, Del. 1921
 Eugene Baumgartner—Oakland, Md. 1931
 Earl Beardsley—Salisbury, Md. 1951
 C. L. Beaven—El Paso, Tex. 1908
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 John Doenges—Olney, Ill. 1945
 Edward Dorian—New Britain, Conn. 1937
 Hamilton P. Dorman—Washington, D. C. 1943
 Parker S. Dorman—Washington, D. C. 1947
 Robert H. Dreher—Wind Gap, Pa. 1934
 George H. Dunn—Princess Anne, Md. 1950
 William P. Englehart—Baltimore, Md.
 William G. Esmond—Baltimore, Md. 1951
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 Charles R. Foutz—Westminster, Md. 1897
 Louis Friedman—Norfolk, Va. 1912
 Charles Gardner—Bridgeport, Conn. 1901
 Joseph M. George, Jr.—Las Vegas, Nev. 1938
 Frank J. Geraghty—Baltimore, Md. 1926
 Samuel S. Glick—Baltimore, Md. 1925
 Raymond B. Goldberg—Baltimore, Md. 1943
 Albert E. Goldstein—Baltimore, Md. 1912
 Nathaniel J. Gould—New York, N. Y. 1913
 David B. Gray—Charleston, W. Va. 1943
 Donald B. Grove—Cumberland, Md. 1931
 Isaac Gutman—Baltimore, Md. 1934
 William L. Guyton—Waynesboro, Pa. 1938
 George C. Halley—Twin Falls, Ida. 1922
 Ernest G. Hand—Gardensville, Nev. 1909
 Arthur L. Haskins—Baltimore, Md.
 Frank S. Hassler—Wilmington, Del. 1943
 Frederick J. Hatem—Aberdeen, Md. 1951
 Richard C. Hayden—Wilmington, Del. 1944
 Calvin B. Hearne—Wilmington, Del. 1947
 Charles A. Hefner—Roanoke, Va. 1946
 Roland S. Heisley—Honesdale, Pa. 1927
 William G. Helfrich—Baltimore, Md. 1935
 Lewis Herrold—Dover, Pa. 1935
 Robert C. Hopkins—Lake City, Pa. 1951
 William C. Humphries—Front Royal, Va. 1937
 George Hurwitz—Hartford, Conn. 1933
 John C. Hyle—Baltimore, Md. 1950
 David N. Ingram—Houston, Pa. 1922
 Philip A. Insley—Salisbury, Md. 1934
 Samuel Jackson—Valley Stream, N. Y. 1937
 Samuel M. Jacobson—Cumberland, Md. 1931
 Nathan Janney—Baltimore, Md. 1934
 C. Henry Jones—Scranton, Pa. 1936
 Theodore Kardash—Baltimore, Md. 1942
 Abraham Karger—Bronx, N. Y. 1931
 Frank T. Kasik, Jr.—Baltimore, Md. 1950
 Joseph B. Katz—Clinton, N. Y. 1936
 Robert C. Kingsbury—Federalsburg, Md. 1953
 Louis F. Klimes—Baltimore, Md. 1932
 Lawrence Knox—Olney, Ill. 1946
 Martin F. Kocevar—Steelton, Pa. 1918
 Abraham Kremen—Baltimore, Md. 1930
 Lemuel Lasher—Erie, Pa. 1917
 Clarence V. Latimer, Jr.—Hudson Falls, N. Y. 1943
 Thomas F. Lewis—Cumberland, Md. 1950
 Leo H. Ley, Jr.—Cumberland, Md. 1951
 Samuel Lieberman—Bronx, N. Y. 1932
 Charles Milton Linthicum—Linthicum Heights, Md. 1945
 Clarence W. Lurtin—Pittsburgh, Pa. 1903
 Frank F. Lusby—Hagerstown, Md. 1926
 Lycoming County Medical Society (Womens Auxiliary)—Williamsport, Pa.
 Samuel Marton—New York, N. Y. 1924
 Frederick W. Mayer—St. Paul, Minn. 1903
 Alexander J. Maysels—Bethlehem, Pa. 1910

- W. Raymond McKenzie—Baltimore, Md. 1915
- James R. McNinch—Dover, Del. 1945
- Karl F. Mech—Baltimore, Md. 1935
- Leslie R. Miles, Jr.—Lonaconing, Md. 1953
- James H. Miniszek—Brattleboro, Vt. 1938
- Donald W. Mintze—Baltimore, Md. 1944
- Theodore H. Morrison—Baltimore, Md. 1915
- Karl J. Myers—Phillippi, W. Va. 1923
- Paul R. Myers—Ridgway, Pa. 1945
- Henry B. Perry, Jr.—Greensboro, N. C. 1943
- Dudley Phillips—Darlington, Md. 1945
- Maurice C. Pincoffs—Baltimore, Md.
- Frederick P. Pokrass—Reading, Pa. 1937
- William H. Pomeroy—Poquonock, Conn. 1943
- Prince Georges County Medical Society (Womens Auxiliary)—Hyattsville, Md.
- John C. Rawlins—Seaford, Del. 1946
- William T. Reardon—Wilmington, Del. 1934
- John M. Recht—Yonkers, N. Y. 1943
- Walter O. Rehmeier—Monahans, Tex. 1931
- Elton Resnick—Wilmington, Del. 1937
- Samuel T. R. Revell, Jr.—Baltimore, Md. 1937
- James A. Roberts—Silver Spring, Md. 1946
- Fred C. Sabin—Little Falls, N. Y. 1921
- Sidney Saffran—Canonsburg, Pa. 1937
- J. William Schilling—Erie, Pa. 1921
- Blane M. Schindler—Cumberland, Md. 1933
- George P. Schmieler—East Canonsburg, Pa. 1936
- William F. Schnitzker—Hyattsville, Md. 1947
- Louis R. Schoolman—Frederick, Md. 1930
- James H. Shell—Baltimore, Md. 1945
- Elizabeth B. Sherman—Front Royal, V. 1936
- Elizabeth B. Sherrill—Cockeysville, Md. 1941
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- Edward J. Simon—Havre de Grace, Md.
- Michael Skovron—Erie, Pa. 1931
- Alexander Slavcoff—Harrisburg, Pa. 1931
- William B. Smith—Salisbury, Md. 1934
- Edward J. Sokolski—Danbury, Conn. 1945
- W. Glenn Speicher—Westminster, Md. 1929
- Earlin J. Stahler—Allentown, Pa. 1949
- Anthony F. Stedem, Jr.—Baltimore, Md. 1945
- James G. Stegmaier—Cumberland, Md. 1942
- Benjamin M. Stein—Hempstead, N. Y. 1935
- Russell A. Stevens—Wilkes Barre, Pa. 1931
- William S. Stone—Baltimore, Md.
- Kyle Y. Swisher, Jr.—Baltimore, Md. 1948
- Homer E. Tabler—Hancock, Md.
- Frank J. Theuerkauf, Jr.—Erie, Pa. 1948
- Frank J. Theuerkauf, Sr.—Erie, Pa. 1924
- Bernard O. Thomas, Jr.—Frederick, Md. 1938
- Bernard O. Thomas, Sr.—Frederick, Md. 1906
- Harry G. Thompson—Mt. Vernon, Ill. 1932
- A. Frank Thompson, Jr.—Concord, N. C. 1940
- Francis J. Townshend, Jr.—Ocean City, Md. 1942
- James M. Trench—Hartford, Conn. 1947
- Max Trubek—New York, N. Y. 1926
- Charles Van Buskirk—Baltimore, Md.
- Henry J. Walton—Baltimore, Md. 1906
- Washington County Medical Society (Womens Auxiliary)—Hagerstown, Md.
- Alexander A. Weinstock—Baltimore, Md. 1924
- H. Lawrence Wheeler—Baltimore, Md. 1917
- Arthur G. Wilkinson—New Haven, Conn. 1936
- Charles H. Williams—Pikesville, Md. 1942
- Clifford E. Wilson—Norwich, Conn. 1950
- James E. Wilson—Canonsburg, Pa. 1912
- Walter L. Winkenwerder—Baltimore, Md.
- Allen C. Wooden—Wilmington, Del. 1944
- William Yudkoff—Bayonne, N. J. 1929

FACULTY TO MARK 150TH ANNIVERSARY DECEMBER 18, 1957

PLANS UNDERWAY FOR OFFICIAL RECOGNITION OF GRANTING OF ORIGINAL CHARTER

Dr. William S. Stone, Dean, has recently announced plans for a Faculty Convocation to be held on Wednesday, December 18, 1957 in honor of the 150th anniversary of the granting of the charter to the School of Medicine.

This auspicious occasion will be marked by appropriate exercises and current plans are that they will take place in historic Chemical Hall and will serve to re-dedicate the principles and ideals of the school in the same environment in which they were created a century and a half ago.

Details of the Convocation will be recorded in the January, 1958 number of the Bulletin.

BULLETIN TO BE PUBLISHED SIX TIMES A YEAR

ADDITION OF ANNUAL REPORT TO ADD SIGNIFICANTLY TO COVERAGE OF UNIVERSITY DEVELOPMENTS

Following a recent meeting of the Editorial Board of the Bulletin of the School of Medicine it was announced through the office of the Dean that the School of Medicine will publish a condensation of the activities of the various departments of the School of Medicine during the previous year. This annual report will be published as an additional number of the Bulletin of the School of Medicine and will be included in the annual subscription price without additional cost. It is expected that the "annual report number" will constitute a newly added December number, to appear some time shortly after Christmas. The index for the year will appear also as a part of the annual report number. Scientific articles and school news will not be carried in this edition.

Further details of the development of the annual report will appear in subsequent editions of the Bulletin.

NEW DEPARTMENT ORGANIZED

Dr. Gladys Wadsworth, formerly of the Department of Anatomy, has been named head of the newly organized Department of Physical Therapy. Housed in temporary quarters on the 4th floor of the Gray Laboratory, Dr. Wadsworth began the first course in physical therapy with a class of 4 students. With renovations of the old laboratory and classroom spaces nearly complete, the department now begins its second year of increasing activity and service to the School of Medicine.

NEW DERMATOLOGY GROUP ORGANIZED

After some 30 years of meeting with the Washington group the Baltimore-Washington Dermatological Society has divided because of an increasing number of dermatologists practicing in both cities.

Initially a small society, mutual difficulties concerning the programming of the

joint meetings resulted in the abandonment of the joint society and a creation of the Baltimore Dermatologic Society. One joint meeting per year with the Washington group will be planned.

At the organizational meeting of the new Baltimore Society Dr. Harry M. Robinson, Jr. was named president, Dr. Maurice Sullivan, Vice-president and Dr. Stanley N. Yaffe, secretary-treasurer. The formulation of a constitution was placed in the hands of Dr. Sullivan and a committee. It is expected that the constitution will follow the pattern established by the American Academy of Dermatology and that requirements for membership will be identical.

Founders of the new society included the following dermatologists:

Dr. Harry M. Robinson, Jr.	Dr. Maurice Sullivan
Dr. Harry M. Robinson, Sr.	Dr. Leon Ginsburg
Dr. Raymond C. V. Robinson	Dr. Lloyd Ketron
Dr. Eugene S. Bereston	Dr. Hanford Hopkins
Dr. Mark Hollander	Dr. Louis Harmon
Dr. John F. Strahan	Dr. Harold Zheutlin
Dr. Stanley N. Yaffe	Dr. Lee Lerman
Dr. David Bacharach	Dr. Jacob Ludwig
Dr. William Bundick	Dr. Frederic Glass
Dr. Albert Shapiro	Dr. David P. Roberts
Dr. Israel Zeligman	Dr. Link
Dr. Morris M. Cohen	Dr. Krowl
Dr. Francis A. Ellis	Dr. Milton Cohen

DEPARTMENTAL NEWS

DEPARTMENT OF ANATOMY

An RCA-EMV-3 Electron Microscope, (costing approximately \$27,000) has been installed in the Department of Anatomy under a \$30,000 grant from the United States Public Health Service, National Institute of Health. This instrument will be used for cancer research and other research projects jointly with the Departments of Pathology and Microbiology.

Dr. Frank H. J. Figge, Professor of Anatomy and Head of the Department has announced receipt of the following research grants:

\$10,000 for leukemia research, Dr. Figge. (N.I.H. National Cancer Institute)
 \$10,000 for research in the therapeutic effects of Porphyrins. Dr. Figge. (N.I.H. National Cancer Institute)

\$5,000 for research on Neurosecretions. Dr. Theodore F. Leveque. (N.I.H. National Institute of Neurological Diseases and Blindness)

\$5,000 for research on the anatomy of the lung. Dr. Vernon Krah. (Renewal)

\$5,000 for research on dynamics of amniotic fluid and maternal foetal exchange.

Dr. Robert E. McClafferty. (Renewal)

Dr. Roger H. Davidheiser was recently awarded the Ph.D. degree in Anatomy. His thesis was entitled "Studies on Enzymatic Porphyrin Biosynthesis in Horderian Glands and other Tissues of Mice". Dr. Davidheiser will remain in the Department of Anatomy as Research Fellow and Instructor in Anatomy.

DEPARTMENT OF PHARMACOLOGY

The following papers will be delivered by members of the Department of Pharmacology at the John Jacob Abel Centennial Meeting of the Society of Pharmacology and Experimental Therapeutics at Johns Hopkins University, September 4-6, 1957: "Estimation of Vinamar and Fluomar in Blood". Ruth Musser, Chung Park and

John C. Krantz, Jr.

"Studies on the Pharmacological Action of a New Series of Antispasmodics". Harold Bryant and John C. Krantz, Jr.

"Studies on the Vasodepressor Action of 8-Aminothephylline". Raymond M. Burgison, John Hensela and John C. Krantz, Jr.

"Pharmacology of Hexafluoro-diethyl-ether". Alfred Ling, Edward B. Truitt and John C. Krantz, Jr.

"The Clinical Use of Hexafluoro-ethyl-ether in the Treatment of Mental Illness". A. Kurland, A. Esquibet and John C. Krantz, Jr.

A \$25,000 grant from the United States Navy has been received for studies in toxicology. Dr. Krantz.

A \$5,000 grant from the United States Public Health Service, N.I.H., for studies on the pharmacology of alcohol has been awarded to Dr. Edward B. Truitt.

Dr. Raymond M. Burgison has been awarded a \$5,000 grant for studies on hypotensive agents by the Brayton Pharmaceutical Company, Chattanooga, Tennessee for 1957-1958.

DEPARTMENT OF PHYSIOLOGY

Dr. William H. Amberson, Professor of Physiology and Head of the Department, has been awarded a sabbatical leave of absence until January 1, 1958, which he will spend at the Marine Biological Laboratories, Woods Hole, Massachusetts, conducting research and writing a new college textbook entitled "Outline of Vertebrate Physiology".

Dr. John White and Miss Sylvia Himmelfarb have been awarded a 3 year grant of \$8,780 per year by the United States Public Health Service, N.I.H., for research in muscle physiology.

Richard H. Glasser was recently awarded the Ph.D. degree in Physiology. He has been appointed Instructor in Physiology at the University of North Carolina School of Medicine.

Dr. Dietrich C. Smith, Associate Dean and Dr. Frederick P. Ferguson, Professor of Physiology have been awarded a \$64,000 grant from the United States Public Health Service, N.I.H., to run for four years, for research on the effects of predecompression stress upon water and electrolyte distribution and renal function.

The following papers were delivered at the Meeting of the American Physiological Society at Iowa City, Iowa, September 3-4, 1957:

"Crystallization and Properties of Delta Protein, a New Fibrous Protein". John White and Sylvia Himmelfarb.

"Hypokalemia and Respiratory Alkylosis in Anesthetized Dogs during Acute Decompression Stress". Deitrich C. Smith and Frederick P. Ferguson.

NEWS ITEMS

Extensive alterations are being made in the Bressler Research Laboratory to provide additional laboratory space and animal quarters for research. New laboratories for surgical research and enzymology have been constructed on the sixth floor for the Department of Surgery under the supervision of Dr. Robert W. Buxton, Professor of Surgery.

For the departments of Medicine and Microbiology, extensive revisions have been made on the fifth floor to provide enlarged quarters for the section of Infectious Diseases. Eight sterile cubicles, a tissue culture laboratory, enlarged animal quarters for small infected animals, monkey quarters, and a ramp connecting the Bressler Laboratory with animal quarters on the top floor of the Gray Laboratory have been built.

Other new laboratories on the fifth floor are the laboratories of the Section on Pulmonary Diseases, Dr. William S. Spicer, Director, and the Section of Endocrinology and Metabolic Diseases, Dr. Thomas Connor, Director, both of the Department of Medicine.

The Rh laboratories have been rebuilt and provided with new quarters on the fifth floor of the Bressler Building.

An unrestricted grant of \$5,000 from Wyeth, Incorporated, Philadelphia, Pennsylvania, has been awarded to Dr. Theodore E. Woodward, Professor of Medicine and Head of the Department for research in infectious diseases. Dr. Eugene Blank has been appointed Wyeth Fellow in Medicine from January 1 to June 30, 1958.

The lecture room on the second floor of the Bressler Laboratory was completely air-conditioned and sound proofed during the summer.

DEPARTMENT OF DERMATOLOGY ACTIVE AT INTERNATIONAL CONGRESS

The Eleventh International Congress of Dermatology which met in Stockholm during July was materially influenced through contributions from the faculty of the School of Medicine. Dr. Francis Ellis and Dr. William Bundick presented an exhibit entitled "Dyskeratosis". Dr. Ellis also read a paper on "Lichen Planus". Dr. Harry M. Robinson, Jr., Professor of Dermatology, was invited to serve as chairman of a symposium on the use of "Antibiotics" in dermatology. Dr. Robinson also participated in another symposium entitled "Barrier Creams". In addition, Dr. Robinson read 3 papers on Professor Marchionini's panel which concerned "Antibiotics and Antibiotic Steroid Combinations". Drs. Robinson and Ellis visited numerous dermatology clinics in Europe. Dr. Robinson concluded his tour with a visit to the University of Leeds.

An interesting highlight of the convention was a separate invitation tendered to Dr. Harry M. Robinson, Sr., Emeritus Professor of Dermatology, to moderate a discussion panel on "Serologic Tests in Syphilis".

STUDENT UNION BUILDING PLANS ADVANCE

The office of the Dean recently announced that bids and the actual contracts for the first stage of the Student Union Building to be constructed on the site of the

old laundry and the parking lot west of the old University Hospital will soon be out. It is expected that construction will proceed within 6 weeks after the formal bids are received and the contract award made. It is therefore possible that the Student Union Building will be completed some time during the 1958-59 academic year.



Site of old Davidge Hall, now razed, on which will rise the new Library for the Baltimore professional schools

DR. UHLENHUTH SUFFERS ILLNESS

Dr. Eduard Uhlenhuth, retired professor of anatomy, was recently a patient at the University Hospital. The alumni activities during June week found Dr. Uhlenhuth convalescing at home. The editor of the Bulletin received the following letter:

"I am at home again, still have to move slowly . . . but I am doing a lot of work, having finished preparing the new American edition of Sobotta, Vol. I. Just now, reading over the program of the alumni activities, I am thinking intensely of all my friends. It is the first time that I must miss commencement, alumni banquet and everything else.

"I miss you all very much, but hope to be back again soon. Kindest greetings."

EDUARD UHLENHUTH

NOTICE

Number 4 of the Bulletin of the School of Medicine is published by the Dean's office and is the catalogue of the School of Medicine. It is not customarily included

in the subscription price and is mailed separately from the Dean's office. Inquiries for number 4 should be addressed to:

Office of the Dean
School of Medicine
University of Maryland
Lombard and Greene Streets
Baltimore 1, Maryland

Distribution is free.

NEW APPOINTMENTS TO FACULTY—PROMOTIONS AND RESIGNATIONS*

PROMOTIONS

- Dr. Andrew G. Smith—From Assistant Professor of Microbiology to Associate Professor of Microbiology
Dr. Henry C. Freimuth—From Assistant Professor of Legal Medicine to Associate Professor of Forensic Toxicology
Dr. William V. Lovitt, Jr.—From Assistant Professor of Legal Medicine to Associate Professor of Forensic Toxicology
Dr. Frederick R. McCrumb—From Associate in Medicine to Assistant Professor of Medicine
Dr. Kurt Levy—From Associate in Medicine to Assistant Professor of Medicine
Dr. Irving Freeman—From Associate in Medicine to Assistant Professor of Medicine
Dr. Aubrey D. Richardson—From Instructor in Preventive Medicine and Medicine to Associate in Preventive Medicine and Medicine
Dr. Dorothy C. Holsworth—From Instructor in Anesthesiology to Associate in Anesthesiology
Dr. Norma K. Raffel—From Assistant in Clinical Bacteriology to Instructor in Clinical Microbiology
Dr. Carola B. Guttmacher—From Assistant in Psychiatry to Instructor in Psychiatry
Dr. Jack Raher—From Fellow in Psychiatry to Instructor in Psychiatry

NEW APPOINTMENTS

- Dr. Harlan I. Firminger—Professor of Pathology and Head of the Department
Dr. Cyrus L. Blanchard—Professor of Otolaryngology
Dr. Eugene Brodey—Professor of Psychiatry
Dr. Jerome K. Merlis—Professor of Clinical Neurophysiology and Head of the Department
Dr. John K. Frost—Associate Professor of Pathology
Dr. Woodrow W. Schier—Assistant Professor of Medicine
Mr. Lloyd M. Bates—Assistant Professor of Radiology and Radiation Physicist, Department of Radiology
Dr. Abraham A. Polachek—Associate in Medicine
Dr. Mary S. Farber—Instructor in Preventive Medicine
Dr. Walter J. Pijanowski—Instructor in Medicine

* Corrected to July 31, 1957.

Dr. Anthony Hordern—Instructor in Psychiatry
Dr. Norman M. Bacher—Instructor in Psychiatry
Dr. Robert G. Duval, Jr.—Instructor in Medicine
Dr. David N. Marine—Instructor in Medicine
Dr. Joseph R. Gladue—Instructor in Medicine
Dr. W. Alfred Gakenheimer—Instructor in Medicine
Dr. Alberto Portera—Instructor in Neurology
Dr. Winston C. Dudley—Instructor in Medicine
Dr. Sol Levinson—Instructor in Medicine
Dr. Gertrude M. Gross—Instructor in Psychiatry
Dr. Norman B. Hollingsworth—Instructor in Anesthesiology
Dr. John E. Miller—Instructor in Surgery, Division of Thoracic Surgery
Miss Margaret S. Wilson—Instructor in Psychiatric Social Work
Mrs. Nadja Pats—Instructor in Psychiatric Social Work
Miss Betty C. Overall—Instructor in Psychiatric Social Work
Miss Cecelia McCue—Instructor in Psychiatric Social Work
Dr. Samuel M. Bradley—Assistant in Medicine
Dr. Morton M. Krieger—Assistant in Medicine
Dr. Robert E. Trattner—Assistant in Medicine and Fellow in Psychiatry
Dr. Adoracion L. Tanega—Assistant in Psychiatry
Dr. Earl Cohen—Assistant in Psychiatry
Dr. Hector Ramirez-Honey—Assistant in Psychiatry
Dr. Sonia Raines—Assistant in Psychiatry
Dr. Robert T. Singleton—Assistant in Medicine
Dr. Joseph Fitzgerald—Assistant in Medicine
Dr. Thomas D. Michael—Assistant in Otolaryngology
Dr. Robert S. Mosser—Assistant in Pediatrics
Dr. Henry D. Perry, Jr.—Assistant in Obstetrics and Gynecology
Dr. Alfredo Horacio S. Gagneten—Assistant in Obstetrics and Gynecology
Dr. George E. Wells, Jr.—Assistant in Obstetrics and Gynecology
Dr. Robert E. Yim—Assistant in Pediatrics
Mrs. Margaret Nolley—Assistant in Anatomy
Dr. Walter Weintraub—Research Associate in Psychiatry
Dr. Edmund S. Howe—Research Associate in Psychiatry
Dr. Johnson S. L. Ling—Research Associate in Pharmacology
Miss Nancy J. Hunt—Research Assistant in Psychiatry
Miss Epp Tammaru—Research Assistant in Psychiatry
Mr. Tongsoo Park—Research Assistant in Experimental Surgery
Miss Kathryn A. Gallagher—Research Assistant in Psychiatry
Mr. Hans Bergmann—Research Assistant in Pathology
Miss Elaine E. Robinson—Research Assistant in Pediatrics
Mr. Alfred S. C. Ling—Research Assistant in Pharmacology
Miss Elizabeth E. Kispina—Research Assistant in Anatomy
Dr. Elias K. Guttman—Baltimore Rb Laboratory Fellow in Medicine
Dr. Morton D. Kramer—Fellow in Medicine

Dr. Harry H. Herbst—Fellow in Medicine
 Dr. Paul Mercado, Jr.—Fellow in Radiology
 Dr. Steven Malina—Fellow in Experimental Neurosurgery
 Dr. Daniel F. Johnson—Fellow in Psychiatry
 Dr. Rafael Longo-Cordero—Hoffberger Fellow in Neurosurgery
 Dr. Howard D. Cohn—Baltimore Rh Laboratory Fellow in Medicine
 Dr. Barbara Hulfish—Junior Research Fellow in Pathology
 Dr. Sydney S. Katz—American Cancer Society Fellow in Cystopathology
 Dr. Teruo Masukawa—Fellow in Cystopathology
 Dr. Yu-Chen Lee—Fellow in Medicine (Hypertension)
 Dr. Watson P. Kline—Junior Research Fellow in Division of Forensic Pathology
 Mr. Adrian S. Weyn—Medical Student Fellow in Psychiatry

RETIREMENTS

Dr. Maurice C. Pincoffs—Professor of Preventive Medicine and Head of the Department

RESIGNATIONS

Dr. Robert E. Farber—Assistant Professor of Preventive Medicine
 Dr. Ursula T. Slager—Associate in Pathology
 Dr. Walter S. Easterling—Associate in Psychiatry

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Post Graduate Office: Room 201

Old Medical Building, Lombard and Greene Streets

Baltimore 1, Maryland

THE CARIBBEAN CRUISE

The response to the Medical Seminar Cruise to the Caribbean has been most gratifying to date and those wishing to go who have not yet made reservations should delay no longer. The American Academy of General Practice will allow 15 hours of Category I Credit to those attending the lectures.

The Stockholm—a 525 foot passenger liner, the largest ever constructed at a Swedish Yard—will sail from Wilmington, North Carolina on November 30th, arriving at Havana on December 2 and Nassau on December 4; returning to Wilmington on December 6.

Among the recreational facilities aboard the Stockholm will be outdoor and indoor swimming pools, deck tennis, trap shooting, bridge tournaments, a concert orchestra, a library and a gymnasium.

Conducting the cruising classrooms will be University of Maryland School of Medicine faculty members, Dr. R. Adams Cowly, associate professor of thoracic surgery; Dr. Martin Helrich, professor of anesthesiology; Dr. John Young, professor of urology and head of the division of urology; Dr. Leonard Scherlis, associate professor of medicine; and Dr. Melchijah Spragins, associate in pediatrics.

BASIC SCIENCE

Basic Sciences As They Apply To The Practice Of Medicine will be repeated this year. Classes will be held from 4:00 to 6:00 P.M. on Wednesday afternoons beginning January 8 and ending May 28. Further information regarding the course may be obtained by writing the Postgraduate Office.

CALENDAR OF EVENTS

Department heads are requested to help the Postgraduate Committee keep the Calendar of Events an accurate and complete listing of medical items. Please call Extension 259 for additions, deletions, corrections or suggestions.

Notices of events to be included in the Calendar must be sent to the Postgraduate Office, Room 201 Medical Building, or by phoning Extension 259, not later than noon on Monday preceding the Monday of publication.

If you wish your name on the mailing list, please send it to the Postgraduate Office.

TV-MD

The University's public information program, TV-MD, begins its seventh year of telecasting in October over WBAL-TV, Channel 11. The presentations will be on Sunday afternoons from 2:30 to 3:00.

UNIVERSITY OF MARYLAND BIOLOGICAL SOCIETY

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V. E. KRAHL

PROCEEDINGS OF THE UNIVERSITY OF MARYLAND BIOLOGICAL SOCIETY

December 12, 1956. Annual Business Meeting. Bressler Library. Officers elected at this meeting were Raymond E. Vanderlinde, President; John I. White, Secretary; Donald E. Shay, Treasurer; Councilors R. M. N. Crosby, E. J. Herbst (to fill the unexpired term of Edward Steers).

The program featured an historically important sound motion picture of a lecture by Dr. John J. Abel.

February 27, 1957. Dinner Meeting in the Mezzanine Dining Room, Friendship International Airport. A paper entitled: "The Chemistry and Physiology of Bioluminescence" was presented by Dr. William D. McElroy, Chairman of the Department of Biology and Director of the McCollum-Pratt Institute, The Johns Hopkins University.

At this meeting the following candidates for membership in the Society were elected:

Elected to Ordinary Membership

Dr. John Autian
Asst. Prof. of Pharmacy
Dr. Leslie C. Costello
Instr. in Zoology (Pharm.)
Dr. Thomas Connor
Asst. Prof. of Medicine
Dr. Norman Doorenbos
Asst. Prof. of Pharm. Chem.
Dr. William C. Esmond
Asst. in Medicine
Dr. John K. Frost
Assoc. Prof. of Path.

Dr. Armand J. Gold
Asst. Prof. Physiol. Res.
Dr. Sheldon E. Greisman
Assoc. in Medicine
Dr. Arthur L. Haskins
Prof. of Obst. & Gyn.
Dr. Lester Kiefer
Instr. in Path. (Med.)
Dr. Henricus G. J. M. Kuypers
Asst. Prof. of Anat. (Med.)
Dr. Ennis C. Layne
Instr. in Pediat. (Med.)

Miss Ann Meredith
Techn., Div. of Inf. Dis.
Dr. Jerome K. Merlis
Prof. of Clin. Neurophysiol.
Dr. Sherwood P. Miller
Fellow in Medicine
Miss Ann Morgan
Res. Asst. in Pharmacol.
Dr. Norma Keigler Raffel
Asst. in Clin. Microbiol.

Dr. Elwyn A. Saunders
Instr. in Anatomy (Med.)
Dr. Sidney Scherlis
Asst. Prof. of Med.
Dr. Merrill J. Snyder
Asst. Prof. of Med.
Dr. Edward B. Truitt
Assoc. Prof. of Pharmacol.
Dr. Charles Van Buskirk
Prof. of Neurol. (Med.)

Elected to Associate Membership

Mr. Earl Becker
Grad. Asst. in Bact. (Dent.)
Miss Ann Virginia Brown
Instr. in Biochem. (Med.)
Mrs. Flo Council
Res. Asst. Biochem. (Med.)
Dr. B. P. Doctor
Fellow in Biochem. (Med.)
Mr. Charles B. Leonard
Grad Asst. in Biochem. (Dent.)
Mr. Alfred Ling
Fellow in Pharm. (Med.)

Mrs. Arlie B. Parker
Jr. Instr. in Biochem. (Med.)
Mr. Thaddeus Pruss
Asst. in Pharmacol. (Pharm.)
Miss Elaine Silver
Lab. Tech. in Physiol. (Med.)
Mr. Victor Vilk
Grad. Asst. in Bact. (Dental)
Mr. Harold R. White
Res. Fellow, Biochem. (Med.)
Mr. Paul Zikoski
Grad. Asst. in Bact. (Dent.)

April 3, 1957. Bressler Library.

Preceding the program a short business meeting was held in which the following persons were elected to Ordinary Membership in the Society.

Dr. Harold R. Bryant
Asst. in Pharmacol (Med.)
Dr. Enoch Callaway, III
Asst. Prof. of Psychiatry
Mr. Elmar Einberg
Res. Asst. in Psychiatry

The following papers were presented:

RECENT DEVELOPMENTS IN STEROIDS. By Dr. Norman J. Doorenbos, Assistant Professor of Pharmaceutical Chemistry, University of Maryland School of Pharmacy.

THE STRUCTURE OF MYELINATED NERVE FIBERS AS OBSERVED WITH PHASE CONTRAST MICROSCOPY. By Dr. William E. Esmond, Instructor in Surgery, University of Maryland, School of Medicine. (See Abstract)

May 8, 1957. Dinner Meeting in the Mezzanine Dining Room at the Friendship International Airport. A talk entitled "The Graduate School" was presented by Dr. Ronald Bamford, Dean of the Graduate School and Head of the Department of Botany, University of Maryland.

ABSTRACT

THE STRUCTURE OF MYELINATED NERVE FIBERS AS OBSERVED WITH PHASE CONTRAST MICROSCOPY. By William G. Esmond, M. D., Instructor in Surgery, University of Maryland School of Medicine.

Recent observations by Geren of embryonic myelinated nerve fibers with the electron microscope indicate that myelin is a component of the Schwann cell and is formed from the membrane of the cell by rotation during development. The present concept of the relation of the myelin layer and axon in living adult nerve fibers is based on the microdissection experiments of de Rényi under the light microscope in which he concluded that the axon is in direct contact with the myelin with no intervening cytoplasmic layer. The mode of myelogenesis proposed by Geren offers a possibility for the inclusion of Schwann cell cytoplasm between the axon-axolemma membrane and the multilayered myelin. Many electron micrographs have been published showing a distinct space between myelin and axon, but this has been interpreted to be the result of shrinkage of the axon away from the myelin layer during fixation. We have studied fresh living myelinated nerve fibers of the frog and the mouse with phase contrast and ordinary illumination. Under phase contrast illumination, the axon could be clearly seen in the tubular myelin surrounded by a cytoplasmic layer between the axon-axolemma membrane and myelin, of considerable thickness amounting to over 2 microns in a 20 micron diameter fiber. The cross sectional area of the periaxial intramyelin cytoplasmic layer is approximately equal in area to the cross sectional area of the axon. When identical fields are viewed under phase contrast and ordinary illumination, the axon which is clearly seen under phase contrast, disappears when ordinary illumination is employed. Under ordinary illumination, the myelin appears to be filled with a homogeneous cytoplasm which has been interpreted to be all axoplasm by previous investigators. Our study using phase contrast illumination indicates that the tubular myelin contains a tubular axon completely surrounded by an equal volume of Schwann cell cytoplasm.

The significance of this periaxial cytoplasmic layer in myelinated nerve fibers remains to be elucidated, but it is hypothesized that it may serve as an external conductor for the continuous transmission of the nervous impulse in myelinated fibers as opposed to the currently accepted hypothesis of saltatory or node to node conduction. Myelin is a good insulator and may serve to contain the ionic currents so as to maintain high ionic current densities and thus speed the wave of depolarization along the fiber.

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* July 1, 1957 to June 30, 1958

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DEAN'S LETTER

Dear Members of the Alumni and Friends,

As a fitting ceremony to mark the end of the Sesquicentennial school year, pre-commencement exercises were held on June 7, 1957 in the courtyard of University Hospital. Dr. Alan Chesney was the speaker and his address was on the subject of the role of the University of Maryland, School of Medicine in the founding of the Johns Hopkins School of Medicine. Students presented a historical playlet on the conferring of an honorary degree to the Marquis de Lafayette by the School of Medicine in 1824. The Faculty ladies presented a tea for graduates and guests following the exercises. As a further event to memorialize the founding year of the School of Medicine, it is planned to have a tea on December 18, 1957 in the old school building in honor of December 18, 1807, the date the Legislature at Annapolis passed the act authorizing the School of Medicine.

On June 14, 1957, the Board of Regents of the University approved a 10 year plan for the development of the Baltimore campus of the University. The text of the plan for the School of Medicine is quoted for your information.

PRESENT FACULTY STATUS AND REQUESTS

"The existing facilities that serve the Medical School and the University Hospital are adequate in many respects. Among the more important inadequacies are:

1. The Out-Patient Department occupies an old building originally constructed

as the University Hospital. This building was constructed in 1823, was added to in 1853 and 1896 and has served its usefulness. The building does not now provide adequate space for the out-patient operation and the kind of facilities that are desirable for out-patient use, and should be demolished as soon as a new out-patient facility can be constructed.

2. Present operating rooms of the University Hospital are not sufficient in number to provide for the operations that are scheduled as an essential minimum to the training of students. In addition, they need modernization to meet present minimum standards for such use.
3. The elevator service in the University Hospital is not adequate to handle present activities in the hospital, resulting in loss of working time of the employees, slower than desirable movement of patients, and irritation of visitors.
4. Inadequate quarters are provided for the house officers. These interns and residents are now housed in the main University Hospital building and in the psychiatric wing of the hospital. As many as eight house officers are located in a single room, making the quarters undesirable in comparison with the needs of these medical doctors who are on call for duties throughout the hospital. It is widely recognized that the house officers in any hospital perform a major function in proper care of the patients. Inadequate housing makes it difficult to maintain top performance from this group at all times. In addition, the areas now occupied by the house officers are badly needed for expansion of beds in the hospital.
5. There are not sufficient beds in the University Hospital to provide an adequate teaching program in all the areas of specialization. There are now approximately 600 beds in the University Hospital. It is considered desirable to increase this number to approximately 1,200 if the University is to maintain a teaching program in keeping with the number of students being trained and the increased numbers of students that should be trained. The number of beds available in the hospital have a direct control on the number of patients that are available to allow adequate clinical experience for those in training. Through renovation of the existing spaces and the removal of services not directly connected with patient care, it is possible to increase the number of beds in the existing hospital by approximately 100. Additional hospital facilities must be constructed for further bed expansion.
6. Present areas and facilities for the laboratories that serve as an integral part of the patient care program are inadequate. These laboratories must be enlarged and modernized to meet present needs and must be further enlarged to meet any expansion in number of beds in the hospital.
7. There is inadequate research space for both the basic science and clinical research areas. The Bressler Building, originally donated for research purposes, should be made available for research and basic sciences laboratories, should be provided elsewhere. Areas for clinical research should be provided in the hospital or connected to it.
8. There is need for more trained medical technicians in Maryland. The volume of technical laboratory work that is under way to service patient care allows

an opportunity for the establishment of this type of training program. Such a program has not been established because the areas necessary for certain phases of the training of the medical technician are not available.

9. No emergency generator is available to take care of the electricity needs of the University Hospital in the case of failure of power. Money has been made available to provide a generator that will allow the use of one elevator and electricity for certain operating rooms. This is better than having no source of emergency power but is not adequate for an acute hospital where proper patient care is dependent upon electricity in areas throughout the hospital. A facility capable of taking on the entire electricity needs of the hospital is considered essential.

"In reviewing the more critical needs that should be provided for during the next ten years, the following items are projected:

1. An Out-Patient Building. Such a building would be expected to contain approximately 300,000 sq. ft. of floor space. Based on present prices this would be expected to cost a maximum of \$8,000,000, including equipment, and it is expected that matching Federal funds may provide at least \$3,000,000 of this total cost. This would make the maximum cost to the State \$5,000,000 and it is expected that the building will be constructed in at least two phases so that the maximum request to the State at any one time should be \$2,500,000. It is not expected that any part of this facility will be provided on a self-liquidating basis. \$5,000,000
2. The modernizing and equipping of the operating rooms is expected to cost approximately \$191,000. 191,000
3. The installation of an additional elevator in the University Hospital and the relocation of facilities now located in this elevator well are expected to cost approximately \$190,000. 190,000
4. The providing of a wing to the existing School of Medicine facilities to provide for a medical technology training program and for other School of Medicine needs is expected to cost approximately \$560,000 for construction and \$140,000 for equipment, based on present prices 700,000
5. Providing quarters for house officers is expected to cost approximately \$600,000, based on present prices. 600,000
6. The expansion of beds for the University Hospital during the four year period has been projected to increase from the present 600 to approximately 1,000. This will require the construction of additional hospital facilities for at least 300 beds. Construction and equipping is expected to total approximately \$6,000,000, based on present prices, and it is expected that \$4,000,000 will be requested from the State and \$2,000,000 will be obtained from other sources. 4,000,000
7. To provide an emergency generator capable of handling power needs of the University Hospital, building to house the generator

and some expansion in dietary and plant maintenance and operation areas which must be a part of the University Hospital, will require approximately \$393,000, plus \$35,000 for equipping the enlarged areas.....	428,000
8. To convert the Dentistry-Pharmacy Building to clinical research and other clinical laboratories for the University Hospital is expected to cost approximately \$180,000.....	180,000
9. Expansion of plant maintenance and operation utilities (incinerator, \$75,000; telephone facilities \$40,000; electrical facilities, \$250,000).....	365,000
Total.....	\$11,654,000

"The Basic Science Departments that serve the School of Dentistry, the School of Medicine, and the School of Pharmacy are now located in various buildings occupied by the three schools. There is need for consolidation of these facilities in one area, and for an administrative relationship that will allow closer cooperation in the teaching of the basic sciences to all of the students requiring these courses.

"Room is not now available for expansion of the activities of these departments in their present locations and the space that they occupy is needed for expansion of other activities in each of the schools.

"The Basic Science Departments involved are anatomy, microbiology, physiology, pathology, pharmacology, biochemistry, histology, and embryology. In order to provide for present deficiencies in facilities and for expansion in the work of these departments, a basic sciences building is projected."

To accomplish the plan as outlined, will require the understanding and assistance of all our friends and alumni. We will keep you informed and we will appreciate your help in developing the School of Medicine.

WILLIAM S. STONE, M.D.
Dean

1957 ALUMNI DAY ACTIVITIES IN SUMMARY

The annual Alumni Day activities of the Medical Alumni Association took place on Thursday, June 6, 1957 and were attended by more than 400 alumni of the School. As is customary, the day began with registration and breakfast held in the Medical Alumni-Postgraduate rooms in the old Medical Building. From 10 to 12:30 P.M. a closed circuit televised clinical program was presented under the joint auspices of the Postgraduate Committee, the Maryland Academy of General Practice and sponsored by the Read Drug Company of Baltimore in cooperation with radio station WBAL-TV.

SCIENTIFIC SESSION

10:00 A.M.—"The Use of Cobalt 60 in the Treatment of Cancer".

Dr. Fernando G. Bloedorn, Associate Professor of Radiology and
Head of the Division of Radiotherapy

10:20 A.M.—“Dermatosis Associated with Psychogenic Stimuli”

Dr. Harry M. Robinson, Jr., Professor of Dermatology and Head of the Division of Dermatology

10:40 A.M.—“Otosclerosis”

Dr. Cyrus L. Blanchard, Professor of Otolaryngology and Head of the Division of Otolaryngology

11:00 A.M.—“Open Cardiac Surgery with Hypothermia”

Dr. R. Adams Cowley, Assistant Professor of Thoracic Surgery and Director of Cardio-Pulmonary-Physiology Laboratory

Dr. Leonard Scherlis, Assistant Professor of Medicine

Dr. Martin Helrich, Professor of Anesthesiology

11:25 A.M.—“The Teaching Process—Observations on First Year Courses in Psychiatry”

Dr. Jacob E. Finesinger, Professor of Psychiatry and Head of the Department

11:45 A.M.—“Modern Treatment of Nutritional Anemia”

Dr. Martin Gorten, Instructor in Pediatrics

12:05 P.M.—“Cytologic Pathology in Medicine”

Dr. John K. Frost, Associate Professor of Pathology and Head of the Division of Cytology

12:25 P.M.—Closing Remarks

Dr. William S. Stone, Dean of the School of Medicine

Master of Ceremonies—Dr. W. Carl Ebeling, III

The Scientific Program was followed by the customary luncheon held in the Gymnasium of the Psychiatric Institute. Following this was the annual business meeting of the Medical Alumni Association and the presentation of the annual Alumni Honor Award.

DR. CHARLES REID EDWARDS HONORED

The 1957 Alumni Honor Award and gold key was awarded to Dr. Charles Reid Edwards, prominent Baltimore surgeon and for many years Chief of the Department of Surgery at the School of Medicine. A member of the class of 1913, Dr. Edwards was honored for his long and distinguished career as a surgeon and for his outstanding contributions to science and his devotion to the School of Medicine.

After presentation of the award, Dr. Edwards replied briefly with a very dignified and sincere address of thanks.

DR. WILLIAM B. LONG, JR. NOMINATED PRESIDENT

Dr. William B. Long, Jr., class of 1937, and prominent surgeon of Salisbury, Maryland was elected president of the Medical Alumni Association for the year 1957-58. Dr. Harry M. Robinson, Jr. was named president-elect. At the meeting of the Medical Alumni Association it was formally passed that the Dean of the Medical School and the Administrative Associates be invited to full membership in the Association.



Dr. Charles Reid Edwards receives Alumni Honor Award and Gold Key from Dr. J. Sheldon Eastland. l to r—Dean Stone, Dr. Eastland, Dr. Charles Reid Edwards

ALUMNI BANQUET A SUCCESS

More than 300 members of the Medical Alumni Association gathered at the Lord Baltimore Hotel in honor of the centennial class of 1907 and the sesquicentennial class of 1957. Fourteen members of the class of 1907 were present to receive their 50 year certificates from the hands of Dr. J. Sheldon Eastland, President. Members of the class of 1957 were formally inducted as members of the Medical Alumni Association.

DR. CHESNEY SPEAKS ON HISTORY OF SCHOOL

The principal address of the Sesquicentennial Convocation was given by Dr. Alan M. Chesney, Dean Emeritus of the School of Medicine, Johns Hopkins University. Dr. Chesney spoke on the contributions of the University of Maryland to the founding of the Johns Hopkins School of Medicine and Hospital. (The entire address is carried separately in this edition of the Bulletin.)

The convocation was then concluded by the singing of Maryland, My Maryland and the formal recessional was preceded by the Benediction by the Reverend Bruce McDonald. All faculty and students were in academic regalia. Tea was served on the lawn following the convocation.

The following alumni of the School of Medicine registered on Alumni Day.

1895

Nicholas G. Wilson

1897

Lucius N. Glenn

1903

Edgar B. Friedenwald

	1907	
Jacob W. Bird	Edmond D. Tucker	Charles I. Shaffer
Frank V. Langfitt	J. L. Mathesheimer	
	1909	
	Harry M. Robinson, Sr.	
	1910	
Harry R. Seelinger		George C. Coulbourn
	1911	
H. A. Codington	John F. Hogan, Sr.	William H. Triplett
	1912	
C. Loring Joslin		L. O. Schwartz
S. J. Roberts		H. Boyd Wylie
	1913	
	Charles Reid Edwards	
	1914	
	Austin H. Wood	
	1915	
	William R. Johnson	
	1916	
	Henry F. Buettner	
	1917	
Charles H. Audet, Sr.	L. A. Lasher	M. H. Porterfield
Fred H. Clark	Carl C. Nohe	E. C. Reitzel
James Holmes	Frank N. Ogden	H. Lawrence Wheeler
	1920	
Howart M. Bubert	F. A. Holden	William J. B. Orr
Louis C. Dobihal	George C. Medairy	J. Morris Reese
	1922	
Julian P. Linke		H. Melmuth Sternberg
George E. Shannon		A. H. Trynin
	1924	
	Clewell Howell	
	1925	
	J. Sheldon Eastland	
	1926	
	Margaret B. Ballard	
	1927	
T. Nelson Carey	E. E. Covington	Joseph M. Adzima
	1929	
F. A. Clark		Mable I. Silver
J. H. Conn		George H. Yeager
	1930	
	Louis R. Schoolman	
	1931	
	Arthur Siwinski	

1932		
David S. Clayman	Louis F. Klimes	Samuel Proctor
A. A. Krieger	R. R. Louft	Carl A. Wirts
	William O. McMillan	
1933		
	Sidney Novenstein	
1934		
	Louis V. Blum	
1935		
William G. Helfrich		Karl F. Mech
Howard B. Mays		Harry M. Robinson, Jr.
1936		
Walter Karfgin	W. Kennedy Waller	Gibson J. Wells
1937		
Louis E. Daily		Isadore Kaplan
Grover C. Hedrick, Jr.		Samuel T. R. Revell
1938		
Joseph M. George, Jr.		John A. Wagner
Robert C. Sheppard		Theodore E. Woodward
1940		
	T. Edgie Russell	
1941		
	John D. Young, Jr.	
1942		
Lawrence J. Koleshko	E. Roderick Shipley	K. M. Zimmerman
Henry H. Sadler	W. H. Townshend, Jr.	
1943		
Ruth W. Baldwin		J. Emmitt Queen
E. Ellsworth Cook		Edwin H. Stewart, Jr.
1944		
R. C. Cloninger		Donald W. Mintzer
1945		
	John M. Dennis	
1946		
	Raymond L. Markley	
1947		
Harry D. Cooper	John F. Hogan, Jr.	William R. Post
William B. Cooper	Robert C. Hunter	Jack H. Powell, Jr.
John E. Evans	David E. Imbrie	William Schnitzker
Robert K. Gardner	Arlie R. Mansberger	John P. White, III
1948		
Katherine V. Kemp	H. Patterson Mack	Kyle Y. Swisher
1949		
Max J. Miller		Lillian K. Ziegler

1950

Francis J. Borges

1951

H. D. Richardson

1952

Lawrence D. Egbert

Joseph P. Fisher

Irvin Hyatt

1953

R. C. Kingsbury

Arnold L. Vance

1954

David A. Levy

Robert E. Yim

1956

Theodore R. Carski
Faculty

Frank H. J. Figge

John C. Krantz, Jr.

Frank W. Hachtel

Dietrich C. Smith

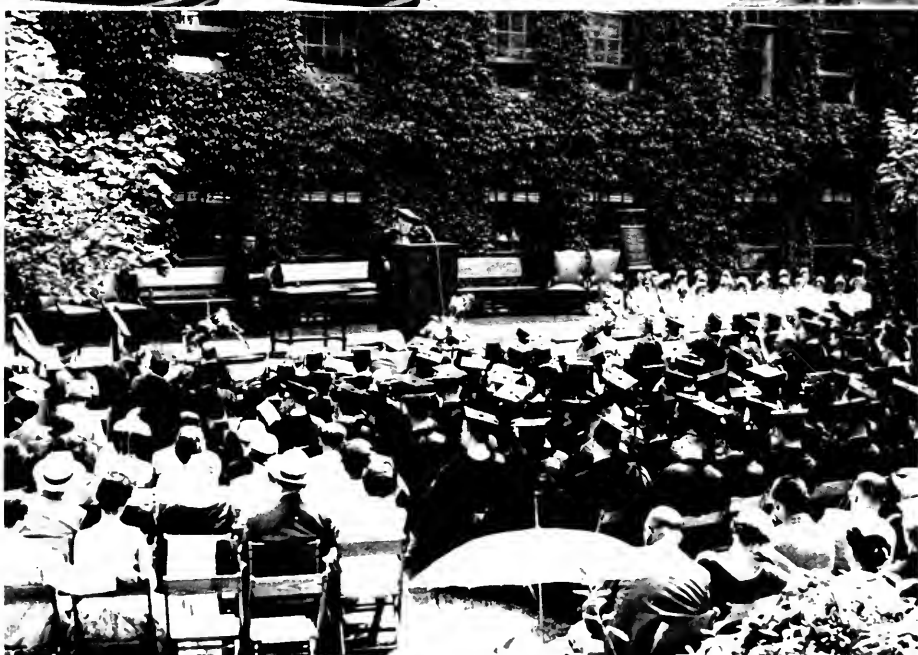
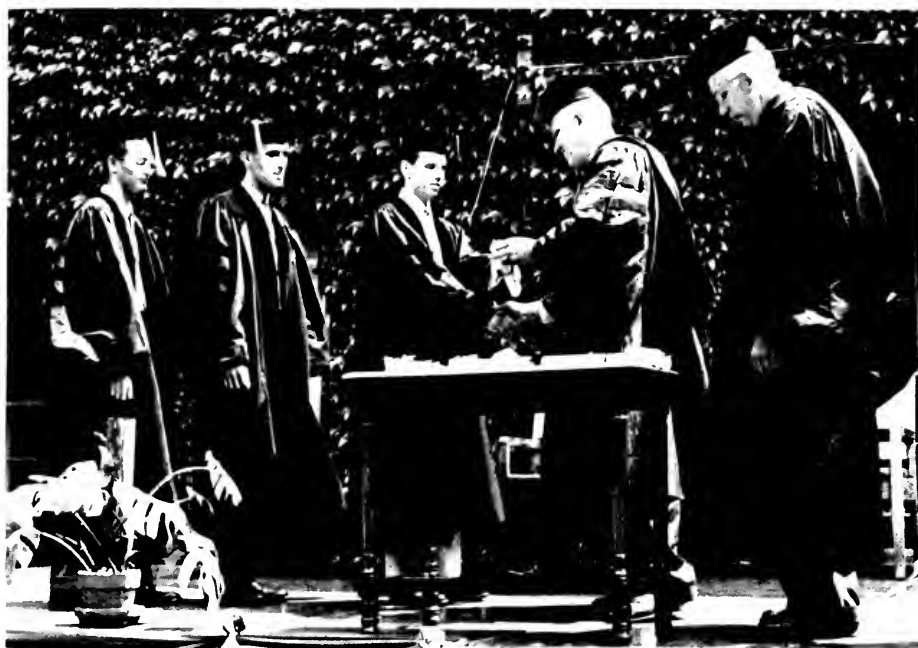
Vernon E. Krah

PRE-COMMENCEMENT EXERCISES FOLLOW ALUMNI DAY

As a part of the formal celebration of the Sesquicentennial of the School of Medicine, the faculty gathered in convocation on Friday, June 7, 1957, on the grounds of the University Hospital.



Sesquicentennial Convocation—academic procession. l to r—Dr. Alan M. Chesney, Mr. John Donaldson, Mrs. Mason B. Starring, Dean William S. Stone, Dr. R. Lee Hornbake, Miss Renée Starring, Dr. T. B. Symons, Dr. John A. Wagner, Dr. D. C. Smith and Dr. George Entwistle.



Top: Students receive honors from Dean Stone

Bottom: Dr. Chesney addresses Sesquicentennial Convocation



Academic Procession forms in front of old Medical Building decorated for Sesquicentennial Celebration

ALUMNI ASSOCIATION SECTION



"I do solemnly swear . . ." (Dean Stone administers the Oath of Hippocrates to the class of 1957)

NOTICE

To meet an urgent need the Board of Directors of the Medical Alumni Association have made available a small "nest egg" in the amount of \$445.55 to create a Student Loan Fund.

Contributions to this fund are earnestly solicited and all remittances should be specifically designated "FOR STUDENT LOAN FUND".



Tablet honoring Dr. Francis Donaldson, is unveiled by Miss Renée Starring. l to r—Dean Stone, Dr. Edward Schmidt, President, Maryland Society of Pathologists, Miss Starring, Dr. John A. Wagner, Chairman of the Sesquicentennial Committee.



Class of 1947 attends Alumni luncheon. Seated—E. Anne Dentry Mattern. 1 to r —Douglas Cooper; David Imbrie; Arlie Mansberger; Harry Scott; Jack H. Powell, Jr.; William Cooper; Robert Gardner; Frank Faraino; William Schnitzkern, Jr.; John White, III; William Post

Following an invocation by the Reverend Bruce McDonald of Westminster Presbyterian Church, greetings to the graduating class were delivered by Dean William S. Stone. This was followed by a selection by the Nurses Choral Group.

A group of students then re-enacted the conferring of the honorary degree of Doctor of Laws in 1824 to the Marquis de Lafayette. This was followed by the unveiling of a memorial to the late Dr. Francis Donaldson, class of 1847 and pioneer pathologist. The plaque was presented to the School of Medicine by Dr. Edward Schmidt, president of the Maryland Society of Pathologists which donated the tablet. It was unveiled by Miss Renée de Pelleport Starring, great great granddaughter of Dr. Francis Donaldson and was accepted for the School of Medicine by Dr. William S. Stone, Dean.

Presentation of honors to the graduates was the next item in line and was followed by the administration of the oath of Hippocrates by the Dean.

DR. RUZICKA AWARDED LOYOLA HONORARY DEGREE

Dr. Frederick Ruzicka, Sr., prominent practicing physician in the Baltimore area for more than 40 years was recently awarded the honorary degree of doctor of laws by Loyola College at the annual commencement June 9, 1957.



DR. ALBERT B. KUMP

DR. ALBERT B. KUMP HEADS NEW JERSEY MEDICAL SOCIETY

Dr. Albert B. Kump, class of 1938, and an outstanding Bridgeton, New Jersey physician and surgeon, was recently installed as president of the Medical Society of the State of New Jersey.

A native of Bridgeton, Dr. Kump is a second generation member of one of the State's most prominent medical families. His mother, the late Dr. Reba Lloyd, was beloved and respected by all who knew her and won high esteem in medical circles when women were first entering the field.

Dr. Kump graduated from the Bridgeton High School and the Blair Academy. He later entered Johns Hopkins University receiving his Bachelor of Science degree in 1933. After his graduation from the School of Medicine in 1938 he served an internship at the Cooper Hospital in Camden, New Jersey and then entered practice in Bridgeton. He is a member of the Bridgeton Hospital Surgical Staff and has been Chief of Obstetrics there since 1946.

Dr. Kump has been a pioneer and leader in industrial medicine, serving as plant physician for the Owens-Illinois Glass Company's Bridgeton plant since 1940. He is also active in numerous professional and lay organizations being past president of the Cumberland County Medical Society and has served as chairman of the Subcommittee on Medical Practice of the Medical Society of New Jersey.

As a tribute for his humanitarian service to the people of Bridgeton he was awarded first honorable mention in the 1957 American Legion Citizenship Award program—one of the highest honors an individual can receive.



DR. HENDERSON IRWIN

DR. IRWIN HONORED BY WAYNE COUNTY COMMUNITY

Dr. Henderson Irwin, class of 1912, whose life typifies that of the country doctor, was recently honored for his 44 years of service to his home community, Eureka, North Carolina.

Dr. Irwin, also a leader in education, was honored by the dedication of a portrait which will be hung in the lobby of the Eureka school.

A graduate of Davidson College and the University of Maryland School of Medicine, Dr. Irwin served his internship at the University Hospital. He later began practice in Charlotte, North Carolina prior to his coming to Eureka. His one desire was said to practice in a rural community close to nature and humanity.

A.M.A. PARTY IN NEW YORK A SUCCESS

DR. JOSEPH NATARO HEADS SUCCESSFUL VENTURE

Some 44 physicians and their wives gathered at the customary annual Alumni Association-A.M.A. Cocktail Party held on June 5, 1957, at the Municipal Coliseum

in New York City on the occasion of the annual American Medical Association convention.

Headed by Dr. Joseph Nataro, class of 1925, of Newark, New Jersey, the following alumni and friends of the University attended:

Drs. L. H. Limauro, class of 1906; Joseph Nataro, class of 1925; Jerome Nataro, class of 1946; Frank Nataro, class of 1955; Joseph F. Nataro, class of 1959; Harold Fischman, class of 1925; Joseph Levine, class of 1926; Sol M. Donchi, class of 1927; Louis C. Gareis, class of 1938; Arthur Karfgin, class of 1932; Joseph S. Stovin, class of 1922; James J. Stovin, class of 1956; Alfred Stahl, class of 1906; John McGowan, class of 1955; Joseph Zimring, class of 1936; Samuel Steinberg, class of 1936; William Griefinger, class of 1936; Aaron Feder, class of 1938; Henry DeVincentis, class of 1926; Benjamin F. Tefft, class of 1905; Charles A. Minnefor, class of 1925; L. W. Blane, class of 1914; L. M. Tierney, class of 1936; David R. Levine, class of 1931; Allen A. Spier, class of 1943; H. L. Seabright, class of 1944; Henry P. Talbott, class of 1927; Everet Wood, class of 1935; B. J. Statman, class of 1937; William Yudkoff, class of 1929; A. H. Meister, class of 1928; J. V. Grecca, class of 1941; Isadore Neistadt, class of 1929; N. A. Antonius, class of 1924; Benton Perry, class of 1952; Samuel Leiberman, class of 1932; Jules Cooper, class of 1934; Rudolph Berke, class of 1930; Carl F. Rothschild, class of 1940; James Peterman, class of 1923; Edward A. Newell, class of 1948; Stanley P. Balcerzak, class of 1925. Dr. William S. Stone, Dean of the School of Medicine, was also present at the meeting.

ITEMS

Dr. Timothy A. Callahan, class of 1938, is presently practicing at Mosquera, New Mexico.

Among those who participate in the sesquicentennial exercises during the June week just past were **Drs. Nicholas G. Wilson**, class of 1895 and **Lucius N. Glenn**, class of 1897, both of whom are still in active practice in Norfolk, Virginia and Gastonia, North Carolina respectively.

Dr. Robert K. Arthur, Jr., class of 1951, has announced the removal of his office to 519¹/₂ North Main Street, High Point, North Carolina. Dr. Arthur will be engaged in the practice of obstetrics and gynecology.

At the meeting of the American Medical Association in June, 1957, held in New York City, **Dr. Frank J. Ayd, Jr.**, class of 1945, won Honorable Mention for his exhibit "Putting Psychiatry Back into Medicine" for the Section—Nervous and Mental Disease. In September, 1957, Dr. Ayd was invited to attend the International Congress of Psychiatry held in Zurich, Switzerland where he gave a paper entitled "Prolonged Treatment of Schizophrenia with Reserpine". After his return from Europe Dr. Ayd was guest speaker at the Ohio Academy of General Practice at which time he presented a paper entitled "The Art of Treatment with Tranquilizing Drugs".

Dr. Harry E. Hill, class of 1946, has announced the opening of his office for the practice of internal medicine and diseases of the chest at 8819 Reseda Boulevard, Northridge, California.

Dr. Irvin Hyatt, class of 1952, has announced the opening of his office for the practice of gastroenterology at 11 East Chase Street in Baltimore.

Dr. Henry F. Maguire, class of 1945, has recently been certified as a specialist by the American Board of Obstetrics and Gynecology. Dr. Maguire's office is at 1301 Medico-Dental Building, San Diego, California.

Dr. George H. Friskey, class of 1955, who served his internship at St. Agnes Hospital and who completed a year of pathology training at the School of Medicine, has recently opened his office for the general practice of medicine at 4815 Wilkens Avenue in Baltimore.

Dr. Robert M. N. Crosby, class of 1943, has announced the removal of his office for the practice of pediatric neurosurgery and neurology to 2 West Read Street in Baltimore.

Dr. Albert Trucker, class of 1956, was recently a visitor on Greene Street. Dr. Trucker is serving as first assistant resident in surgery at the Moffett Hospital of the University of California in San Francisco. He plans later to complete a residency in plastic surgery.

Dr. James J. Gerlach, class of 1946, has announced the limiting of his practice to otology and otologic surgery. Dr. Gerlach's offices are at 4 East Eager Street in Baltimore.



DR. ALBERT E. GOLDSTEIN

DR. ALBERT E. GOLDSTEIN AWARDED HONORARY DEGREE

DOCTOR OF SCIENCE DEGREE PRESENTED AT SESQUICENTENNIAL COMMENCEMENT

Dr. Albert E. Goldstein, prominent Baltimore urologist, alumnus of the University of Maryland class of 1912, and until recently an active member of the staff of

the School of Medicine in the department of pathology, was awarded an honorary degree of doctor of science in the University of Maryland at the Sesquicentennial Commencement exercises held at College Park on June 8, 1957.

In presenting Dr. Goldstein for the honorary degree, the mandamus contained abundant reference to his long and enviable career as a urologist, his many scientific contributions and his long and distinguished career in the service of the University of Maryland.

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The Medical Alumni Association can still offer a few of the fine, registered silver medals struck in commemoration of the 150th Anniversary of the School of Medicine. These may be obtained by writing the Medical Alumni Association, Lombard and Greene Streets, Baltimore 1, Maryland. Prices are as follows:

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Obituaries

Dr. Otis Lawrence Quillen

Dr. Otis Lawrence Quillen of Saint Mary's, West Virginia, died at his home on April 30, 1957 following a short illness.

A native of Letart Falls, Ohio and a member of the class of 1912, he began private practice in Belleville, West Virginia and later moved to Jacksonburg, West Virginia and Belpre, Ohio before settling in Saint Marys in 1932.

Dr. Quillen was a member of the American Medical Association, the West Virginia Medical Association and the Parkersburg Academy of Medicine. He was appointed superintendent of the West Virginia Training School in May, 1942 serving until April, 1944. For a time he had been county health officer and served in many civic organizations.

Dr. William Wiley Chase

Dr. William Wiley Chase, class of 1927, and resident of Washington, D. C., died at Garfield Hospital on May 16, 1957. Dr. Chase had recently been nominated chairman of the department of surgery at the new Washington Hospital Center. A trained general surgeon, he had been particularly interested in surgery of the stomach and large intestine.

A native of Baltimore and a graduate of Western Maryland College, he became a member of the resident staff of Garfield Hospital following his graduation from the University of Maryland School of Medicine. From 1942 to 1946 he served in the Army Air Force Medical Service and was chief of the surgical service in hospitals in Denver, Colorado and Omaha, Nebraska. In 1955 the honorary degree of Doctor of Science was conferred upon him by his Alma Mater, Western Maryland College of which he was a member of the Board of Governors.

Dr. R. Edward Garrett

Dr. R. Edward Garrett, class of 1890 and former superintendent of the Spring Grove State Psychiatric Hospital in Maryland, died on June 14, 1957. He was 89 years old.

A graduate of the Baltimore City College, Dr. Garrett served as resident physician for 5 years in the psychopathic division of the Bay View Hospital (now Baltimore City Hospitals) after his graduation from medical school. He then served briefly as an assistant resident in surgery at the Johns Hopkins Hospital and later as assistant physician at the Spring Grove Hospital beginning in 1899. He served as superintendent from 1928 until 1935.

Anderton, Herbert Seth, San Diego, Calif.; class of 1912; aged 68 served during World War I; died, February 15, 1957, of coronary thrombosis.

Arbaugh, Edward Vincent, Sr., Martins Ferry, O.; P & S, class of 1900; aged 81; died, April 3, 1957, of pneumonia.

Athey, Henry Benedict, Baltimore, Md.; class of 1911; aged 76; died, December 8, 1956.

Baer, Adolph, Brooklyn, N. Y.; class of 1928; aged 51; died, December 7, 1956, of coronary thrombosis.

Bagby, John Robert, Pulaski, Va.; class of 1893; aged 88; died, March 21, 1957, of cerebral hemorrhage and arteriosclerosis.

Bronsten, Irvin Cecil, Yonkers, N. Y.; class of 1926; aged 54; died, March 4, 1957, of coronary disease.

Campbell, Willard Burton, Grove City, Pa.; B.M.C., class of 1897; aged 87; served during World War I; died, March 21, 1957.

Cary, French Strother, Chicago, Ill.; P & S, class of 1906; aged 77; served during the Spanish-American War and World War I; died, December 11, 1956, of acute coronary thrombosis.

Chase, William Wiley, Washington, D. C.; class of 1927; aged 55; served during World War II; died, May 16, 1957, of bronchogenic carcinoma.

Christensen, Newell A., Philadelphia, Pa.; class of 1914; aged 69; died, November 10, 1956, of cancer of the stomach.

Clovis, Elijah Ellsworth, Wheeling, W. Va.; P & S, class of 1905; aged 77; died, May 13, 1957, of arteriosclerotic heart disease.

Cochran, George Robert, Newton, N. C.; class of 1912; aged 73; died, April 20, 1957, of myocardial infarction.

Eisner, Maurice Solomon, Pittsfield, Mass.; P & S, class of 1912; aged 69; died, November 16, 1956, of coronary occlusion.

Ewens, Arthur Edward, Haddonfield, N. J.; class of 1904; aged 75; died, January 18, 1957, of cerebral hemorrhage.

Fairing, John Walker, Shaker Heights, O.; B.M.C., class of 1898; aged 84; died, April 12, 1957, of coronary thrombosis and pneumonia.

Fazenbaker, Anderson J., Westernport, Md.; aged 63; died, February 22, 1957, of chronic myocardial degeneration.

Gentry, Charles Wofford, Greenville, S. C.; class of 1903; aged 79; served during the Spanish-American War and World War I; died, December 30, 1956.

Gordon, Abraham S., Brooklyn, N. Y.; class of 1923; aged 61; died, February 2, 1957.

Hagen, Thomas Joseph, Sarasota, Fla.; B.M.C., class of 1903; aged 81; died, February 22, 1957, of heart block and arteriosclerotic heart disease.

Hall, William Shepherd, Baltimore, Md.; class of 1899; aged 80; died, November 25, 1956, of acute myocardial infarction.

Hill, James Chisolm, Abbeville, S. C.; class of 1906; aged 75; served during World War I; died, March 12, 1957.

Long, Samuel Herman, Chattanooga, Tenn.; class of 1909; aged 71; served during World War I; died, November 10, 1956, of an asthmatic attack.

Mason, John Sanford, Yountville, Calif.; class of 1909; aged 67; served during World War I; died, December 16, 1956, of lobar pneumonia and congestive heart failure.

Messerly, Charles B., Martins Ferry, O.; P & S, class of 1902; aged 77; served during World War I; died, January 31, 1957, of coronary disease.





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